United States Environmental Protection Agency

Fiscal Year 2006 Environmental Information Exchange Network Grant Program

Solicitation Notice

U.S. Environmental Protection Agency
Office of Environmental Information
Office of Information Collection
Information Exchange and Services Division
Information Exchange Partnership Branch
September 2005

OFFICE OF ENVIRONMENTAL INFORMATION

Fiscal Year 2006 Environmental Information Exchange Network Grant Program Solicitation Notice

U.S. Environmental Protection Agency
Office of Environmental Information
Office of Information Collection
Information Exchange and Services Division
Information Exchange Partnership Branch

Fiscal Year 2006 Environmental Information Exchange Network Grant Program Solicitation Notice

Table of Contents

FY 2006 Environmental Information Exchange Network Grant Program Solicitation Notice

Overview Information

Agency Name and Office: U.S. Environmental Protection Agency (EPA), Office of Environmental Information (OEI)

Funding Opportunity Title: Fiscal Year (FY) 2006 Environmental Information Exchange Network Grant Program

Announcement Type: Initial Announcement; Subject to Availability of Funding Solicitation Notice

Funding Opportunity Number: EPA-OEI-06-01

Catalog of Federal Domestic Assistance (CFDA) Number: 66.608

Dates:
- September 30, 2005 – Deadline for submitting questions about this notice to EPA
- October 17, 2005 – Question-and-answer teleconference for applicants (tentative)
- November 21, 2005 – Deadline for submitting applications to EPA
- June 2006 – Issuance of FY 2006 Exchange Network Grant Program awards

Executive Summary: EPA, states, territories, and tribes are working together to develop a nation-wide Environmental Information Exchange Network. The Exchange Network is an Internet- and standards-based, secure information network that facilitates the electronic reporting, sharing, integration, analysis, and use of environmental data from many different sources. The Exchange Network will make it easier to obtain the timely, accurate information needed to make decisions concerning human health and the natural environment.

The Exchange Network Grant Program provides funding to states, territories, tribes, and tribal consortia to help them develop the information management and information technology (IM/IT) capabilities they need to participate in the Exchange Network. This grant program also supports the exchange of data and mentoring, planning and training activities related to the Exchange Network. This grant program may include the standardization, exchange and integration of geospatial information to address environmental, natural resource, and related human-health issues.

The FY 2006 Exchange Network Grant Program includes four groups of activities:

- Infrastructure – supports the development or upgrade of information management and technology (IM/IT) capabilities (e.g., development and testing of nodes or node clients) and tools to participate in the Exchange Network;
- Data Exchange, Analysis and Integration – supports the development of the capability and the exchange of data through the Exchange Network;
- Mentoring, Planning and Training – supports activities such as mentoring other partners on the Exchange Network, planning activities that support the Exchange Network, and developing training materials and conducting training on specific topics related to the Exchange Network; and
- Challenge – supports the planning, development, and implementation of collaborative, multi-partner, innovative projects that demonstrate the value of the Exchange Network.

Award Information: The FY 2006 appropriation, Public Law 109-54, includes $20,000,000 for the Environmental Information Exchange Network Grant Program. Authorization for the Exchange Network Grant Program over the past four years has been provided by the annual appropriations for EPA: FY 2002 (Public Law 107-73), FY 2003 (Public Law 108-7), FY 2004 (Public Law 108-199) and FY 2005 (Public Law 108-447).

EPA expects to award approximately 40 to 50 assistance agreements, ranging from $75,000 to $1,000,000. The exact number of awards will depend on the amount of EPA's appropriation for the grant program, the number of applications submitted to EPA by the application deadline, and the competitive review of the applications received. EPA anticipates most of the awards will be in the $75,000 to $500,000 range, with a limited number of awards in the Challenge Group for up to $1,000,000.

EPA expects to issue the FY 2006 Exchange Network Grant Program awards in June 2006, and the standard period of performance for each project will be two years. If EPA anticipates having substantial involvement in a proposed project or if all or part of an award is to be issued as EPA-provided in-kind services (i.e., in lieu of direct funding), then EPA will issue the assistance agreement as a cooperative agreement, rather than a grant.

Eligibility Information: Eligible applicants for the Exchange Network Grant Program include states, the District of Columbia, U.S. territories (for example, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands), federally recognized Indian tribes, and intertribal consortia of federally recognized tribes.

An intertribal consortium is eligible to apply for assistance from the Exchange Network Grant Program if its meets the following criteria:

- the majority of the consortium's members are federally recognized Indian tribes;

- all of the consortium's federally recognized tribal members have authorized the consortium to apply for and receive assistance (if awarded) from the Exchange Network Grant Program; and
- the intertribal consortium has adequate accounting controls to ensure that only federally recognized tribal members will benefit directly from the award and receive and manage the awarded funds.

Regional air pollution control districts may apply for assistance if they are legally considered to be agencies or instrumentalities of the state under applicable state laws.

The following entities are not eligible to apply for funding from the competitive Exchange Network Grant Program: state/territorial/tribal universities; city, town, county, or regional governments; nonprofit organizations, including organizations that represent the interests of co-regulators/co-implementors in executing environmental programs.

EPA encourages all applicants to work with organizations that could contribute to the development, expansion, and use of the Exchange Network, even if such organizations are not themselves directly eligible to apply for a grant.

Application and Submission Information:
Applicants for the FY 2006 Exchange Network Grant Program must submit a complete application package to EPA by November 21, 2005. Complete packages will be processed first. Applicants may submit their applications in hard copy (original plus two copies) through the U.S. Postal Service or an overnight mail or courier delivery service *or* electronically through the Grants.gov Web site (http://www.grants.gov). EPA will not review or fund any applications that are postmarked after November 21, 2005, or received from ineligible applicants. Applicants using Grants.gov should note that the application must be received by midnight Eastern Time on November 21, 2005 to be eligible. Electronic applications are automatically date stamped when received through Grants.gov.

Application and Review Information: All applications submitted to EPA by eligible applicants and postmarked or received electronically by November 21, 2005, will be competitively evaluated by an EPA Review Panel based on the evaluation criteria outlined in the solicitation notice.

After issuance, the awards will be monitored by EPA Regional Project Officers. Assistance recipients must comply with all administrative and programmatic conditions outlined in the assistance agreements. Each award recipient will be required to submit semi-annual performance progress reports to EPA, describing the progress that has been achieved in meeting the recipient's goals and milestones.

Agency Contacts: Information about the Exchange Network Grant Program is available on the Internet at http://www.epa.gov/exchangenetwork/grants/index.html. Questions about this solicitation notice or the grant program in general may be addressed to

Rebecca Moser, Exchange Network Grant Program Manager, at moser.rebecca@epa.gov or (202) 566-1679.

Full Text of Announcement

FY 2006 Environmental Information Exchange Network Grant Program Solicitation Notice

I. Funding Opportunity Description

I-1. Introduction

The U.S. Environmental Protection Agency (EPA) and its state, territorial, and tribal partners are working together to develop a nation-wide Environmental Information Exchange Network. The impetus for developing the Exchange Network arose from discussions between EPA and state environmental agencies about the challenges of collecting, sharing, and using environmental information to protect and enhance human health and the natural environment. In 1998, EPA and the states formed the State/EPA Information Management Work Group (IMWG). The IMWG provided the conceptual design for developing a nation-wide system network to collect and exchange environmental information more efficiently and effectively. The initial concept for the Exchange Network was described in the *Blueprint for a National Environmental Information Exchange Network* (October 2000) and further developed in the *Implementation Plan for the National Environmental Information Exchange Network* (February 2002). In 2004, the IMWG commissioned the Network Planning Action Team (NPAT) to develop a Business Plan for the Network. The NPAT's *Exchange Network Business Plan* (March 2005) contains proposals, strategies and a vision intended to guide the Network's growth as it moves into a period of managing implementation and expansion. The Business Plan recommended, among other things, a new governance structure for the Exchange Network. Transition to the new governance structure began in July 2005. (See Section VIII for Web site links to these documents.)

In a relatively short period of time, the Environmental Information Exchange Network is becoming a reality. All 50 states and a number of tribes and territories have participated in developing the Exchange Network at some level. It is now a tangible Internet- and standards-based, secure information network that is being used to report and share environmental data from many different sources. The Exchange Network is making it easier to obtain the timely, accurate information needed to make decisions concerning human health and the natural environment.

The Exchange Network Grant Program provides funding to states, territories, tribes, and tribal consortia to help develop the information management and information technology (IM/IT) capabilities they need to participate in the Exchange Network. The level of participation in the Exchange Network will vary, depending on the business needs of particular partners. Most states have developed "nodes" on the Exchange Network that

will allow them to exchange data with EPA and other partners, as well as publish their data on the Exchange Network. Several tribes will have nodes established by the end of 2005. The Exchange Network has the flexibility to allow participation at various levels; however, EPA's ultimate goal is for all state/tribes/territories to have the capability to exchange a wide variety of data to enhance environmental decision-making.

The Exchange Network Grant Program supports the following: the acquisition and development of computer hardware/software needed to connect to the Exchange Network; the development of common data standards, formats, and trading partner agreements for sharing data over the Exchange Network; mentoring, planning and training activities; and collaborative efforts needed to effectively implement the Exchange Network. This grant program may also include the standardization, exchange, and integration of geospatial information to address environmental, natural resource, and related human-health issues.

This grant program supports Goal 5 (Compliance and Environmental Stewardship), Objective 2 (Improve Environmental Performance through Pollution Prevention and Innovation), Sub-objective 4 (Environmental Policy Innovation) of the 2003-2008 EPA Strategic Plan. The overall goal of this program is to improve compliance and environmental stewardship by facilitating the collection, integration and analysis of high-quality data that supports environmental decision-making. The Program Results Code assigned to the funding for this program is consistent with this strategic goal/objective/sub-objective.

It is EPA policy to link proposed assistance agreements to the Agency's Strategic Plan and Government Performance and Results Act architecture. This policy ensures that outputs and outcomes are appropriately addressed in assistance agreements, work plans and performance reports. This allows EPA to consider how the results from assistance agreements contribute to the Agency's programmatic goals and objectives. (Please see Appendix A for definitions for the terms "outcome" and "output.")

The overall outcome expected from the FY 2006 Exchange Network assistance agreements is better environmental decisions through improved access to, and exchange of, improved environmental information. To achieve this outcome, the grant program supports a number of intermediate outcomes that include the following:

- increased speed and timeliness of data exchange by allowing data exchanges to happen more frequently, thereby decreasing the lag between partner systems;
- increased efficiency of data exchange by reducing administrative burden, including reducing or eliminating manual intervention for tasks such as scheduling, resubmissions, or security;
- improved quality of data through additional and more efficient error checking and/or earlier detection of errors and discrepancies, as well as electronic collection;
- improved standardization and comparability by using common data standards and formats to provide additional definition, structure, and integration opportunities;

- harnessed economies of scale through shared infrastructure and shared tools, to achieve reduced costs and expanded functionality;
- increased amount of data shared among partners by encouraging more flows over the Network and among more partners;
- increased data use and integration across institutional boundaries by leveraging a common strategy for environmental Web services; and
- increased knowledge as a result of an Exchange Network.

The Exchange Network Grant Program has four groupings of assistance activities that can be utilized to develop innovative proposals. The groupings are: Infrastructure; Data Exchange, Analysis and Integration; Mentoring, Planning and Training; and Challenge. Each of the activities within these groups has an output that is measurable. Examples of an Infrastructure group output include the development of an Exchange Network node, or the implementation of information technology (IT) hardware to enhance participation in the Exchange Network. Data Exchange, Analysis and Integration group output examples include implementation of a suggested Exchange Network data flow activity or a demonstration of the use of data and the publishing of a web service by other Exchange Network partners. An output from the Mentoring, Planning and Training group could be the development of an Exchange Network training course for states, tribes or territories who are becoming actively engaged in the partnership. The number of times the training is given would be another output. Challenge group outputs could include any of these examples, implemented in a collaborative partnership between multiple Exchange Network partners.

I-2. Program History

The FY 2006 appropriation, Public Law 109-54, includes $20,000,000 for the Environmental Information Exchange Network Grant Program. This funding solicitation notice is subject to the availability of funds for this program in the FY 2006 annual appropriations for EPA. Authorization for the Exchange Network Grant Program over the past four years has been provided by the annual appropriations for EPA: FY 2002 (Public Law 107-73), FY 2003 (Public Law 108-7), FY 2004 (Public Law 108-199) and FY 2005 (Public Law 108-447).

FY 2006 will be the fifth year of the Exchange Network Grant Program. In FY 2002, FY 2003, and FY 2004, EPA provided a total of $64,541,110 for state/territorial/tribal awards and associated program support awards through the Exchange Network Grant Program. In FY 2005, EPA expects to award an additional $19,544,418 for state/territorial/tribal awards and associated program support awards through the Exchange Network Grant Program.

In FY 2002, EPA received 109 applications and issued a total of 83 awards. (Note that 15 of these FY 2002 awards were issued to states that were listed as formal project partners on collaborative Challenge Grant projects proposed by lead states.) In FY 2003, EPA received 117 applications and issued a total of 67 awards. In FY 2004, EPA received 89 applications and issued a total of 67 awards. In FY 2005, EPA received 102

applications and expects to issue 59 awards, including state/territorial/tribal and associated program support awards.

As of early August 2005, all states, the District of Columbia, three territories, and nearly forty tribes have received awards and been involved in the development of the Exchange Network. As of August 2005, the Exchange Network Grant Program had contributed to the development of 37 Exchange Network nodes, and a number of additional nodes are currently under development.

EPA and its partners are currently using or planning to use the Exchange Network to exchange data that relate to the following: Beaches (beaches water quality and closure data), Air Facility System (AFS), Air Quality System (AQS), Electronic Document Repository – CAA Compliance/Enforcement/Permitting Documents, Drinking Water Laboratory Results, electronic Discharge Monitoring Reports (e-DMR), Facility Registry System (FRS), Institutional Controls Tracking System (ICTS), Integrated Compliance Information System/National Pollutant Discharge Elimination System (ICIS-NPDES), National Emissions Inventory (NEI), National Pollution Prevention (P2) Results System, Resource Conservation and Recovery Act Information System (RCRAInfo), Safe Drinking Water Information System (SDWIS), Source Water Protection (SWP), Toxics Release Inventory System (TRIS), Underground Injection Control (UIC), Water Quality Monitoring, Water Quality Standards, Integrated Reporting and Water Quality Standards, and National Hydrography Dataset /Reach Address Database.

For information on other state, territorial, and tribal activities, please see the grant activities that are described on the Exchange Network Grant Program Web site at http://www.epa.gov/exchangenetwork/grants/index.html.

I-3. Assistance Activities

The FY 2006 Exchange Network Grant Program will provide funding for the following groups of activities: Infrastructure; Data Exchange, Analysis and Integration; Mentoring, Planning and Training; and Challenge as discussed below:

- Infrastructure – supports the development or upgrade of information management and technology (IM/IT) capabilities (e.g., development and testing of nodes or node clients) and tools to participate in the Exchange Network;
- Data Exchange, Analysis and Integration – supports the development of the capability and the exchange of data through the Exchange Network;
- Mentoring, Planning and Training – supports activities such as mentoring other partners on the Exchange Network; planning activities that support the Exchange Network; and developing training materials and conducting training on specific topics related to the Exchange Network; and
- Challenge – supports the planning, development, and implementation of collaborative, multi-partner, innovative projects that demonstrate the value of the Exchange Network.

The structure of the assistance activities in this solicitation differs from the categories used in previous guidance. The activity groupings outlined above reflect the maturation of the Exchange Network and its grant program. The FY 2006 Exchange Network Grant Guidance is designed to help states, territories, tribes, and tribal consortia develop proposals that are integrated, collaborative, and support the business needs of Exchange Network partners. At the same time, the guidance is flexible enough to provide applicants the opportunity to design innovative assistance agreements appropriate to their needs. Applicants may select activities from any or all of the groupings to prepare their proposal. Applicants should not include activities that have previously received funding and if the proposal is similar to previously funded activities, the applicants should briefly discuss how previous assistance agreements and the FY 2006 proposal differ.

The activity groups are described in more detail below. Applicants should also refer to Appendices A, B, C, and D when developing their application. Appendix A provides relevant definitions of terms. Appendix B describes the status and plans for activities related to a number of national environmental information systems and other suggested data flow activities for Exchange Network partners. Appendix C provides more information on activities that could be included and should be consistent with the Mentoring, Planning and Training Group. Appendix D is the guidance on preparing the Quality Assurance Guidelines) and is designed to help states, territories, and tribes plan and implement high-quality Exchange Network projects after funding. This Appendix provides guidance on the development of goals, tasks, outcomes and outputs, which are elements of the work plan.

Applicants are encouraged to propose projects that are integrated. The concept of integration will vary with the project being proposed. For example, a proposal may demonstrate better integration between information, programs, or media. An integrated proposal could also address how an applicant plans to deploy an operational node, develop schema for a data flow, prepare flow configuration documents, and mentor other Exchange Network partners on the data flow.

Infrastructure Group

The Infrastructure Group supports the development of basic IM/IT capabilities that are needed to participate in the Exchange Network, as well as upgrades that are specifically related to the applicant's participation on the Exchange Network. The following types of activities could be proposed for funding:

- Develop of an Exchange Network node within a reasonable time (e.g., one year, but depending on the applicant's current capabilities).
- Implement a node client. (Only for a tribe or an agency within a state that is developing or has already developed a fully operational node).
- Obtain, develop or implement other IT hardware or software that will enhance participation in the Exchange Network (e.g., servers, processors, storage devices/media, telecommunications products/services, and computer peripherals).
- Deploy infrastructure that supports implementation of the Cross-media Electronic Reporting Rule (CROMERRR).

Data Exchange, Analysis and Integration Group

The Data Exchange, Analysis and Integration Group supports the development and exchange of data through the Exchange Network. Applicants proposing to develop a new flow are expected to agree to develop the flow configuration document. (See http://www.exchangenetwork.net, Data Exchanges, for examples.) Applicants who propose deploying an existing flow must agree to use the applicable flow configuration document. Collaborative applications are strongly encouraged.

Data flow implementation includes things such as developing or obtaining the appropriate XML schema that are based on data standards, establishing a Central Data Exchange (CDX) Web account, mapping the applicant organization's data to the XML schema, verifying the data format, and submitting the data to EPA. The data may also be exchanged with other Exchange Network partners in order to test schema and data quality.

This group includes the following types of activities:

- Implement one or more of the following data flows using the Exchange Network (listed alphabetically):
    - AFS
    - AQS
    - e-Beaches
    - e-DMR
    - Electronic Document Repository – CAA Compliance/Enforcement/Permitting Documents
    - FRS
    - ICIS-NPDES
    - ICTS
    - Integrated Reporting/Assessment Database
    - NEI
    - National Hydrography Dataset/Reach Address Database
    - P2 Results System
    - RCRAInfo
    - SDWIS/Federal Version
    - SWP Data Exchange
    - TRIS
    - STORET
    - Water Quality Standards
    - UIC Database

- Develop data flows that build on successful geographic environmental initiatives. For example, data on Regional ecosystem or watershed data (e.g., for the Great Lakes, Long Island Sound, Chesapeake Bay, U.S./Mexico border, Gulf of Mexico, etc.). One example of such a project would be to use the Exchange Network to share watershed monitoring data and the analytical results produced by watershed analysis tools.

- Develop unique analytical tools that enhance data quality and integration. (Duplicative geospatial tool or data development is strongly discouraged.)
- Develop web-based services, security enhancements, or automated data quality checking, validation tools that will enhance the availability, integrity, quality, and utility of data exchange over the Exchange Network.
- Demonstrate the use of data, published as Web services by other Exchange Network partners. This use could include the display, analysis, combination, and/or integration of data into local applications. (See http://www.exchangenetwork.net, "Build a Node" for a listing of available Web services.)
- Publish data as Web services that enhance the ability of Exchange Network partners to analyze, integrate, and use those data. These Web services could be selected from the Web services listing on the Exchange Network website or developed by the recipients. New Web services, as well as the XML schema they use, must be registered on the Exchange Network Registry.
- Provide data that will enhance the effectiveness of the federal/state/tribe/territorial environmental/health protection system. An example of such a project might be to develop Exchange Network data flows that support environmental performance self-certification or other performance-based programs.
- Use the Exchange Network to exchange geospatial data to enhance environmental decision-making and programmatic operations. Such a project might require the development of the dataset before exchange.

Mentoring, Planning and Training Group

The Mentoring, Planning and Training Group supports activities that further the development of the Exchange Network through collaborative efforts. Applicants are encouraged to read the discussion in Appendix C related to this Group.

The following types of activities are included in the Mentoring, Planning and Training Group:

- Mentoring activities such as assisting:
    - New or existing Exchange Network partners in establishing nodes or new data flows,
    - Other state, tribal or territorial agencies that have not participated in the Exchange Network to become partners,
    - Major metropolitan statistical areas in establishing connections to the Exchange Network through partnerships and,
    - New or existing Exchange Network partners in obtaining infrastructure or developing data flows.
- Planning activities include, but are not limited to:
    - Convening a community of interest for a Network Data Area Strategy (NDAS) to formulate a plan for collaborative work on the NDAS (See Appendix A for definition),
    - Planning and participating in the development of a data standard for use by Exchange Network partners, and

    - Planning a multi-partner collaboration to develop solutions that can be shared with Exchange Network partners for CROMERRR compliance.
- Training activities including, but are not limited to, the development and conduct of training related to:
    - The development of an Exchange Network training course,
    - Maximizing the use of the Exchange Network after a Network node is established,
    - Methods for modernizing data collection, analysis and availability, within a state, tribe, or territory, or identifying business needs that can be served by the Exchange Network within an area; and,
    - New or existing Exchange Network partners in obtaining infrastructure or developing data flows.

Challenge Group

The Challenge Group supports the planning, development, and implementation of collaborative, multi-partner, innovative projects that demonstrate the value of the Exchange Network. EPA encourages applicants to collaborate with other state/territorial/tribal agencies, as well as other organizations that could make a valuable contribution to the development and use of the Exchange Network (i.e., even if these organizations are not eligible to apply directly to EPA for funding from this grant program). *See Section III-3 for examples of the organizations that may be interested in collaborating with applicants and for eligibility limitations.*

The following types of activities could be proposed for funding under the Challenge Group:

- Pursue any of the activities listed under any of the groups above, provided these activities are done in collaboration with other Exchange Network partners.
- Use the Exchange Network to exchange data that have not previously been available (e.g., environmentally-related human health data; data needed to fill current data gaps; or data related to pollution prevention practices, technologies, or case studies). One example of such a project might be to collect and exchange environmental and related human health data to support efforts by EPA and the Centers for Disease Control and Prevention to enhance the Environmental Public Health Tracking System. Another example might be to develop a collaborative project to share state UIC data (including geospatial coordinates) with EPA to support a national UIC program.
- Use the Exchange Network to exchange data needed to address regional environmental issues (e.g., for the Great Lakes, Long Island Sound, Chesapeake Bay, U.S./Mexico border, Gulf of Mexico, etc.). One example of such a project would be to use the Exchange Network to share watershed monitoring data and the analytical results produced by watershed analysis tools.
- Enhance information security controls, such as identity proofing, to ensure the security of data transactions among Exchange Network partners.

- Develop applications that use data available through the Exchange Network (via Web services) to enhance decision-making, data analyses, risk assessments, and environmental monitoring.

II. Award Information

II-1. General Information

The Catalog of Federal Domestic Assistance number for the Exchange Network Grant Program is 66.608 (http://www.cfda.gov). This funding solicitation notice is the initial announcement concerning the FY 2006 grant program, and no other announcements are planned at this time.

In FY 2006, EPA expects to award approximately 40 to 50 awards for amounts ranging from $75,000 to $1,000,000. EPA will set aside approximately ten percent of the appropriated funds for tribal assistance agreements, but the number and total amount of tribal assistance agreements will depend on the number of tribal applications submitted and on the competitive review of those applications.

EPA reserves the right to partially fund proposals/applications by funding discrete activities, portions, or phases of proposed projects. If EPA decides to partially fund a proposal/application, it will do so in a manner that does not prejudice any applicants or affect the basis upon which the proposal/application, or portion thereof, was evaluated and selected for award, and that maintains the integrity of the competition and selection process.

EPA also reserves the right to reject all proposals and make no awards.

II-2. Assistance Instrument: Grant or Cooperative Agreement

Assistance agreements are used by EPA to transfer money, services, or anything of value to a recipient to accomplish a public purpose. Assistance agreements funded through the Exchange Network Grant Program may be issued in the form of a grant or a cooperative agreement. EPA has the authority to determine whether a grant or cooperative agreement is the most appropriate vehicle for a particular assistance agreement, but EPA will consider the applicant's preference when making this determination.

If an applicant expects to need only minimal involvement by EPA during the proposed project, then the applicant should request assistance in the form of a *grant.*

If the applicant expects to need substantial involvement by EPA during the project, then the applicant should request assistance in the form of a *cooperative agreement.* Substantial involvement by EPA may involve the following: 1) intense monitoring by EPA; 2) joint operational involvement, participation, and/or collaboration between EPA and the recipient; 3) in accordance with 40 CFR §31.36 (g) review of proposed procurements; 4) EPA approval of key recipient personnel; and/or 5) EPA collaboration regarding the scope of work, organizational structure, staffing, mode of operation and other management processes (i.e., assuming the principal purpose of the project is *not* to acquire goods or services for EPA). Assistance recipients that are awarded cooperative

agreements are required to work closely with the EPA Regional Project Officer and other EPA personnel, as determined by EPA, during the performance of the project.

II-3. Funding Mechanism: Direct Funding and/or In-Kind Services

Applicants that request assistance in the form of a cooperative agreement, may also indicate whether they would prefer to receive an award as direct funding, as EPA in-kind services (in lieu of direct funding), or as a combination of both direct funding and in-kind services. EPA will consider applicant requests for in-kind services, but EPA has the authority to decide whether in-kind services will be provided. This decision generally depends on whether the project can be accomplished more efficiently by utilizing EPA in-kind services, whether the scope of the proposed project is within the scope of the vehicle that EPA might use to provide in-kind services (e.g., an existing contract or interagency agreement), and whether the vehicle that EPA might use to provide in-kind services has sufficient capacity to handle the additional workload. If EPA decides to issue an award in the form of in-kind services, the delivery of these in-kind services must be directed and overseen by EPA, and *not* by the recipients. EPA's provision of in-kind services generally includes, but is not necessarily limited to, developing Statements of Work, providing technical direction to the contractor, reviewing/approving deliverables, and reviewing/approving progress reports and invoices.

II-4. Performance Partnership Grants or Consolidated Grants

An applicant whose organization has an existing Performance Partnership Grant (PPG) with EPA, may request that if his/her FY 2006 Exchange Network grant application is recommended for funding, that the award be incorporated into the PPG. The authority to incorporate Exchange Network Grants into PPGs is discussed in a notice entitled, "Performance Partnership Grants," that was published in the *Federal Register* on August 20, 2004 (69 FR 51756, http://www.epa.gov/fedrgstr/EPA-GENERAL/2004/August/Day-20/g19152.pdf).

Similarly, a territorial applicant whose territory has a Consolidated Grant (CG) with EPA may request that if his/her FY 2006 Exchange Network grant application is recommended for funding, that the award be incorporated into the CG (Public Law 95-134, Title 5, Omnibus Territories Act of 1977.

III. Eligibility Information

III-1. Eligible Applicants

Eligible applicants for the Exchange Network Grant Program include states, the District of Columbia, U.S. territories (for example, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands), federally recognized Indian tribes, and intertribal consortia of federally recognized tribes.

An intertribal consortium is eligible to apply for assistance from the Exchange Network Grant Program if it meets the following criteria:

- the majority of the consortium's members are federally recognized Indian tribes;
- all of the consortium's federally recognized tribal members have authorized the consortium to apply for and receive assistance (if awarded) from the Exchange Network Grant Program; and
- the intertribal consortium has adequate accounting controls to ensure that only federally recognized tribal members will benefit directly from the award and receive and manage the awarded funds.

Regional air pollution control districts may apply for assistance if they are legally considered to be agencies or instrumentalities of the state under applicable state laws.

The following entities are <u>not</u> eligible to apply for funding from the competitive Exchange Network Grant Program: state/territorial/tribal universities; city, town, county, or regional governments; nonprofit organizations, including organizations that represent the interests of co-regulators/co-implementors in executing environmental programs.

EPA encourages all applicants to work with organizations that could contribute to the development, expansion, and use of the Exchange Network, even if such organizations are not themselves directly eligible to apply for a grant. (See Section III-3 for examples.)

III-2. Cost Sharing or Matching

No cost-sharing or matching of funds is required by applicants.

III-3. Other Eligibility Information

Applicants are encouraged to submit integrated, proposals, choosing activities from the Infrastructure; Data Exchange, Analysis and Integration; Mentoring, Planning and Training; and/or Challenge groups. Applicants may submit more than one proposal, *if* the proposed projects are different and there is no overlap in the proposed project activities. Based on the activities described in this guidance for the different grant groups, the applicant should submit a well-thought out proposal, accompanied by a detailed work plan, including a detailed budget. States are encouraged to develop one

integrated proposal addressing multiple data flows, as opposed to several, separate proposals that address one data flow each.

Collaboration with Other Organizations

Organizations not directly eligible for funding from this grant program may be interested in collaborating with eligible applicants to advance the development and use of the Exchange Network. EPA encourages all applicants to work with such organizations in developing their applications and implementing funded projects. Such organizations might include the following: state/territorial/tribal universities; city, town, county, or regional governments; nonprofit organizations, including organizations that represent the interests of co-regulators/co-implementors in executing environmental programs. Examples include co-regulator or co-implementor organizations such as the State and Territorial Air Pollution Program Administrators/Association of Local Air Pollution Control Officials (STAPPA/ALAPCO), < http://www.cleanairworld.org>; the Association of State Drinking Water Administrators (ASDWA), <http://asdwa.citysoft.com/>; the Association of State and Territorial Solid Waste Management Officials (ASTSWMO), <http://www.astswmo.org>; the National States Geographic Information Council (NSGIC), <http://www.nsgic.org/ >; the National Pollution Prevention Roundtable (NPPR), <http://www.p2.org>; and the Pollution Prevention Resource Exchange (P2R) <http://www.p2rx.org>.

IV. Application and Submission Information

IV-1. Address to Request Application Package

This document is available on the Exchange Network Grant Program website, http://www.epa.gov/exchangenetwork/grants/index.html. The required application forms are available from EPA's Office of Grants and Debarment at http://www.epa.gov/ogd/AppKit/application.htm. Applicants who are unable to download the forms from this Web site may contact Rebecca Moser at (202) 566-1679 to request copies of the application forms by fax.

IV-2. Content and Form of Application Submission

The application package *must* include the following materials:

1. Standard Form (SF) 424, Application for Federal Assistance
2. SF-424A, Budget Information for Non-Construction Programs
3. SF-424B, Assurances for Non-Construction Programs
4. Certification Regarding Lobbying
5. EPA Form 4700-4, Pre-Award Compliance Review Report
6. EPA Form 5700-54, Key Contacts Form
7. Work Plan (Work plans must address the Environmental Results information discussed in Section I-1 because applications will be reviewed for Section V Evaluation Criteria.)
8. Detailed Itemized Budget
9. SF-LLL, Disclosure of Lobbying Activities, if your organization is involved in lobbying
10. Copy of Negotiated Indirect Cost Rate Agreement, if indirect costs are included in the budget
11. Biographical Sketches for the Project Manager(s)

Appendix E outlines the format for the work plan (no more than ten-single-spaced pages) and provides more detailed application instructions. If the proposal is funded, the recipients would be required to submit a separate QAPP. The QAPP must be based on the guidance in Appendix D.

An intertribal consortium that wishes to apply for the FY 2006 Exchange Network Grant Program must include written documentation in the application package that demonstrates the following:

- a formal partnership exists among the Indian tribal governments that are members of the intertribal consortium, and the majority of the members are federally recognized Indian tribes; and,
- the consortium's federally recognized tribal members have authorized the consortium to apply for and receive assistance (if awarded) from the Exchange Network Grant Program.

IV-3. Submission Date and Time

If submitted in hard copy, the *original application package and two copies* must be submitted to EPA Headquarters and postmarked no later November 21, 2005 (i.e., midnight, applicant's local time). If submitting an application electronically, rather than in hard copy, please submit the application through the Grants.gov Web site, http://www.grants.gov. Electronic applications must be submitted to this Web site no later than midnight Eastern Time on November 21, 2005. The electronic submission of your application must be made by an official representative of your institution who is registered with Grants.gov. For more information, go to http://www.grants.gov and click on "Get Started," and then "Authorized Organization Representative (AOR)." *Please note that the registration process may take a week or longer.* If your organization is not currently registered with Grants.gov, encourage your office to designate an AOR and ask that individual to begin the registration process as soon as possible. EPA advises applicants to submit their electronic applications early, so that if any technical difficulties arise, there will still be time to address them before the application deadline. Appendix E provides detailed instructions on preparing and submitting the application package.

IV-4. Intergovernmental Review

This funding opportunity is *not* subject to Executive Order (EO) 12372, "Intergovernmental Review of Federal Programs." (EO 12372 asks Federal agencies to rely on state and local processes for consulting with state and local government officials who would be directly affected by proposed federal assistance or who would provide non-federal funds for the proposed activities.)

IV-5. Funding Restrictions

Applicants may use funding from the FY 2006 Exchange Network Grant Program for costs associated with personnel salaries and fringe benefits, Intergovernmental Personnel Act Agreements (IPAs) travel, equipment, supplies, contractual costs, in-kind services provided by EPA, and indirect costs. Applicants may *not* use funding from the FY 2006 Exchange Network Grant Program for construction costs. (See Appendix A for definition.)

Operations and Maintenance: Proposed projects should generally focus on Exchange Network planning, development, and implementation activities, rather than on operations and maintenance (O&M). However, it may be appropriate to include some O&M costs in the proposed project budget, such as the O&M costs associated with making the transition from a legacy information system to a modernized system or with enhancing an information system to accommodate a new Exchange Network data flow. O&M costs should *not* account for a major portion of the proposed budget.

Workshops and Conferences: Applicants may propose to conduct workshops/conferences, but such workshops/conferences must be initiated, advertised, and conducted for the benefit of the recipient and other state/tribal/territorial/local

representatives or public participants. Please see discussion in Section I-3 Assistance Activities. Such events may not be conducted primarily for EPA's benefit. If the applicant expects to receive any program income (e.g., from collecting registration fees), then the anticipated program income must be included in the applicant's budget. Program income is allowable, but it must either be used to supplement funding to support the project objectives, finance non-Federal portions of the project, or reduce the total allowable project costs.

Pre-Award Costs: Applicants may request funds to cover pre-award costs that are incurred 90 days or less before the award date. If EPA determines that the requested pre-award costs comply with the OMB Circular A-87 (*Cost Principles for State, Local, and Indian Tribal Governments*, http://www.whitehouse.gov/omb/circulars/a087/a87_2004.html), and that the costs are justified as allocable to the project, then these costs may be included as allowable expenditures at the time that the assistance award document is prepared. However, if for any reason, EPA does not fund the application or the amount of the award is less than the applicant anticipated, then EPA is under no obligation to reimburse the applicant for these costs. Thus, applicants incur pre-award costs at their own risk.

IV-6. Other Submission Requirements

Question-and-Answer Teleconference
EPA has tentatively scheduled a question-and-answer teleconference for interested applicants on Monday, October 17, 2005, from 2:00 to 4:00 p.m. Eastern Time. The teleconference number for this call is 1-866-299-3188. The conference code is 202-566-1679. Applicants are *not required* to participate in this call, but they may wish to do so if they have questions about the FY 2006 Exchange Network Grant program or the application procedures. Applicants should submit any questions they have to Rebecca Moser via email (moser.rebecca@epa.gov) by September 30, 2005, so EPA can prepare for the teleconference.

Work Plans
Work plans should be limited to ten (10) pages, single-spaced. Work plans in excess of ten (10) pages will not be reviewed. Work plans must address the Environmental Results information discussed in Section I-1 because applications will be reviewed for Section V Evaluation Criteria.

Coordination between Environmental and Information Management/Technology Offices
All applicants must ensure that there is sufficient involvement by their organization's IT/IM offices and the appropriate environmental or health media programs, or other appropriate state, tribal or regional agencies. An integrated approach is essential in ensuring that the Exchange Network is developed in ways that best address business needs. Coordination that has already occurred or will occur between the IT/IM offices and environmental program offices should be described in the applicant's cover letter and work plan.

Roles and Responsibilities of Partners
Applicants, who wish to apply for assistance agreements that require collaboration with other Exchange Network partners, must clearly describe the roles and responsibilities, deliverables and products for each participant in the work plan. In addition, each of the deliverables and products must clearly relate to the goal of the project. These partners could be other agencies/departments within the same state, territory, or tribe; or agencies/departments in other states, territories, or tribes. EPA program or regional offices, contractors, or other individuals within the applicant's agency/department should *not* be listed as formal project partners, even though EPA may have significant involvement in the project if the award is issued as a cooperative agreement. The application must be submitted by a single lead organization, and the work plan must clearly indicate the roles and responsibilities of each project participant and how the funds will be distributed by the lead organization if an award is issued. If an award is issued, the lead organization must assume full responsibility for overseeing the project and for distributing agreed-upon funds to the other project partners.

Submission of Applications
Applicants may submit their applications in hard copy through the U.S. Postal Service or an overnight mail or courier delivery service to EPA or electronically through the Grants.gov Web site (http://www.grants.gov). The electronic submission of your application must be made by an official representative of your institution who is registered with Grants.gov. For more information, go to http://www.grants.gov and click on "Get Started," and then "Authorized Organization Representative (AOR)." *Please note that the registration process may take a week or longer.* If your organization is not currently registered with Grants.gov, encourage your office to designate an AOR and ask that individual to begin the registration process as soon as possible. Appendix E provides detailed instructions on preparing and submitting the application package.

Applicants who choose to submit hard copy applications must submit an *original application package plus two copies* to Rebecca Moser, Exchange Network Grant Program Manager. The application must be post-marked by the application deadline (midnight, November 21, 2005, applicant's local time). For hard copy applications, *EPA recommends the use of overnight mail delivery services to avoid any unnecessary processing delays.*

Applicants must send their applications to one of the following addresses:

U.S. Postal Service Deliveries:
Rebecca Moser
U.S. Environmental Protection Agency
Office of Environmental Information
Office of Information Collection
1200 Pennsylvania Ave., NW, Mail Code 2823-T
Washington, DC 20460

Overnight Courier/Mail Deliveries:
Rebecca Moser
U.S. Environmental Protection Agency
Office of Environmental Information
Office of Information Collection
1301 Constitution Avenue, NW, 6th Floor, #6143-K
Washington, DC 20460
Phone: (202) 566-1679

Submission of Optional Electronic Application
If submitting a hard-copy application, you are also encouraged, but not required, to submit an electronic copy of the project work plan to Rebecca Moser via email at moser.rebecca@epa.gov. A hard-copy application package, plus two copies, must still be submitted to EPA, even if the applicant submits an electronic copy of the work plan via email.

EPA Handling of Late or Ineligible Applications
EPA will not review or fund any applications that are postmarked after November 21, 2005, or that are received from ineligible applicants. EPA will not return late or ineligible applications to the submitters. Applications submitted through http://www.grants.gov will be automatically rejected if submitted after midnight Eastern Time, November 21, 2005.

Evaluation Criteria
Applicants are required to submit work plans that address the evaluation criteria. The evaluation criteria are discussed in Section V. Work plans must address the Environmental Results information discussed in Section I-1 because applications will be reviewed for Section V Evaluation Criteria.

Confidential Business Information
In accordance with 40 CFR 2.203, applicants may claim all or a portion of their application/proposal as confidential business information. EPA will evaluate confidentiality claims in accordance with 40 CFR Part 2. Applicants must clearly mark applications/proposals or portions of applications/proposals they claim as confidential. If no claim of confidentiality is made, EPA is not required to make the inquiry to the applicant otherwise required by 40 CFR 2.204(c)(2) prior to disclosure.

Data Universal Number System (DUNS)
Please note that the applicant's Dun and Bradstreet (D&B) Data Universal Number System (DUNS) number must be included on the SF-424. Organizations may obtain a DUNS number at no cost by calling the toll-free DUNS number request line at 1-866-705-5711.

V. Application Review Information

V-1. Evaluation Criteria

Each application will be evaluated and scored using the criteria outlined below. These scores will serve as a "starting point" for deliberations by the EPA Review Panel in conducting the competitive review of applications. Tribal applications will be evaluated separately from state/territorial applications. See Section V-2 for more details on the review and selection process.

Expected Environmental Outcomes/Outputs: (Required) (20 points)
The project proposal will be evaluated on how well the applicant has defined environmental outcomes and outputs for the proposed project. The outcomes must be clearly stated and tied to intermediate outcomes as defined in Section I of this solicitation notice. (i.e., burden reduction, cost savings, improved quality of data, etc.).

Feasibility/Approach: (25 points)
The work plan must be designed to produce the proposed outcomes and outputs. The design is to contain enough detail to show the development of the project and the relationship between the partners, tasks, milestones, and goals. The roles and responsibilities of each partner must be clearly articulated. The milestones must be clear, and supported by a well thought-out schedule that supports the work to be accomplished for the duration of the project. Applicants are encouraged to submit integrated, well designed proposals.

Relevance/Significance: (25 points)
The proposed project must advance and be relevant to the Exchange Network program objectives. The activities related to data flows are expected to be consistent with the Exchange Network Grant programmatic priorities or support the innovative expansion of the Exchange Network as suggested by the Non-National System Data Flows described in Appendix B of this guidance. The activities that relate to mentoring, planning and training are expected to be consistent with the examples discussed in Appendix C. Collaboration is strongly encouraged with all relevant partners, including those who are not eligible to directly apply for assistance.

Resources and Key Personnel: (10 points)
The budget must be adequate to support and complete the proposed work within two years. The budget must be of sufficient detail to describe the cost associated with individual goals. The proposal must highlight key personnel needed to complete the project, in terms of experience, expertise, qualifications and/or availability. Any training needed to obtain expertise and/or qualifications must be addressed in the proposal.

Past Performance: (20 points)
Past performance of applicants on Exchange Network assistance agreements and/or assistance agreements of similar size and scope needs to be provided for consideration. If the applicant has never received a grant from the Exchange Network before, but has

administered a grant in similar size and scope and/or relevance, please include the following information: year(s) the grant was administered, type of grant, name of Agency, Office, and name and contact information for the Project contact. If the applicant does not have a relevant past performance history (e.g., new applicants), they will receive a neutral score for this factor. The programmatic capability of the applicant to successfully perform the tasks in the proposal will be carefully considered.

Other Evaluation Criteria (qualitative criteria)
EPA may also consider the following factors when evaluating the most favorably reviewed applications, and deciding which of them to recommend for funding:

- EPA program offices' ability and/or readiness to support the proposed activities;
- Geographic distribution;
- Balance among data flow activities or other assistance activities;
- EPA's ability to provide requested in-kind services;
- Potential for other Exchange Network partners to build on the results of the proposed project, if successful;
- Use of geospatial data and metadata (as applicable); and
- Overlap in proposals from the same agency.

V-2. Review and Selection Process

Each eligible application will be evaluated and ranked by a panel of EPA representatives. The reviewers will base their evaluation on the criteria listed in Section V-1. Tribal applications will be evaluated separately from state/territorial applications. The review panel will submit reviewer comments and rankings and make funding recommendations to the Assistant Administrator of the Office of Environmental Information (OEI) or her delegate. Final funding decisions will be made by the Assistant Administrator of OEI, or her delegate. OEI may ask applicants whose applications received a favorable review to modify their work plans or budgets before making final funding recommendations. Applicants will not be asked or permitted to make any changes to their work plans/budgets that would affect the basis upon which the application (or portions of the application) was recommended or selected for funding.

V-3. Anticipated Award Dates

EPA plans to issue the awards in the June 2006.

VI. Award Administration Information

VI-1. Award Notices

EPA plans to issue the awards in June 2006. The written Assistance Agreement issued by EPA's Grants Administration Division (GAD) is the authorizing document. The agreement will be mailed to the recipient via the U.S. Postal Service. The original must be signed, dated, and returned to the GAD within three calendar weeks after it is received by the recipient or within any extension of time as may be granted by EPA.

VI-2. Administration and National Policy Requirements

Each Assistance Agreement will include a set of Administrative Conditions and Programmatic Conditions. Examples and excerpts of some of the conditions are outlined below. *Not all of the conditions described below would necessarily apply to all award recipients.*

Electronic Method of Payment: By accepting this agreement for the electronic method of payment through the Automated Clearing House (ACH) network using the EPA-ACH payment system, the recipient agrees to do the following: a) request funds based on the recipient's immediate disbursement requirements by presenting an EPA-ACH Payment Request to the EPA Servicing Finance Office; b) provide timely reporting of cash disbursements and balances in accordance with the EPA-ACH Payment System Recipient's Manual; and c) impose the same standards of timing and reporting on sub-recipients, if any. Failure on the part of the recipient to comply with the above conditions may cause the recipient to be placed on the reimbursement payment method.

Financial Status Report: As required by EPA regulations, the recipient agrees to submit a final Financial Status Report (FSR) (Standard Form 269) within 90 days after the end of the budget period to EPA's Las Vegas Financial Management Center. When the recipient submits a final FSR, the recipient will make an adjustment for the amount of Federal funds, if any, received in excess of the EPA share of the reported total budget period costs.

Payment to Consultants: EPA participation in the salary rate (excluding overhead) paid to individual consultants retained by recipients or by a recipient's contractors or subcontractors shall be limited to the maximum daily rate for Level IV of the Executive Schedule (formerly GS-18), to be adjusted annually. This limit applies to consultation services of designated individuals with specialized skills who are paid at a daily or hourly rate. As of January 1, 2005, the limit is $537.76 per day and $67.22 per hour. This rate does not include transportation and subsistence costs for travel performed and the recipient will pay these costs in accordance with his/her organization's normal travel reimbursement practices.

Indirect Cost Rates: If the recipient does not have a previously established indirect cost rate, the recipient must agree to prepare an indirect cost rate proposal and/or cost

allocation plan in accordance with OMB Circular A-87, *Cost Principles for State, Local, and Indian Tribal Governments*. If EPA is the cognizant federal agency, the state recipient must submit its indirect cost rate proposal within six months after the close of the governmental unit's fiscal year to EPA's Financial Analysis and Rate Negotiation Service Center, Office of Acquisition Management, 1200 Pennsylvania Ave., NW, MC 3802R, Washington, DC 20460.

In-Kind Services: If an assistance agreement involves the provision of in-kind services by EPA in lieu of direct funding for all or part of the award, the delivery of these in-kind services must be directed and managed by EPA. The recipient may not direct the activities of an EPA contractor or a contractor whose services EPA has obtained through an interagency agreement with another federal agency. EPA's involvement may include, but is not necessarily limited to, developing Statements of Work, providing technical direction to the contractor, reviewing/approving deliverables, and reviewing/approving progress reports and invoices. In order to ensure that the in-kind services provided support the recipient's work plan, the recipient must communicate regularly with the EPA Regional Project Officer and other EPA personnel as appropriate. (See Appendix A for definition.)

Pre-Award Costs: Upon reviewing the applicant's request for pre-award costs, EPA has determined that requested pre-award costs comply with OMB Circular A-87, *Cost Principles for State, Local, and Indian Tribal Governments*, and that the costs are justified as allocable to the project. These costs are included as allowable expenditures under the assistance agreement, at the time the assistance award document is prepared. If for any reason, EPA does not fund the applicant's proposed project or the amount of the award is less than anticipated, then EPA is under no obligation to reimburse the applicant or recipient for these costs. Applicants/recipients incur pre-award costs at their own risk.

These are just some examples of administrative and programmatic conditions that could be included in Exchange Network Assistance Agreements.

VI-3. Reporting

Semi -Annual Performance Progress Reports*:*
Reporting is an important obligation that award recipients agree to undertake when they sign an Assistance Agreement. Both EPA and the recipients are accountable to Congress and to the public for the proper and effective use of Exchange Network assistance funds. The award recipient must submit *semiannual progress reports* to the EPA Regional Project Officer electronically (i.e., via email), with a copy to the Exchange Network Grant Program Manager at EPA Headquarters. EPA expects all award recipients to submit complete and timely reports, and it will consider compliance with reporting requirements when evaluating future applications for financial assistance. The EPA Project Officer will be assigned when the award is issued.

These progress reports must be submitted within one month of the end of the reporting period. The reporting periods are from October through March (report due April 30) and

from April through September (report due October 31). The first reporting period for the FY 2006 Exchange Network assistance agreements will be from the start of the project period through March 31, 2007, and the first semi-annual report will be due to EPA on April 30, 2007.

At a minimum, semiannual program reports must include the following:

- An outline of the proposed project goals, tasks, target completion dates, and accomplishments/deliverables for the reporting period;
  - an update on the schedule and status of carrying out the project, including any problems encountered and suggestions to overcome them;
- An explanation of expenditures to date, with expenditures linked to project results;
- Information on each of the following areas:
  - a comparison of actual accomplishments with the anticipated goal and task level outputs and outcomes specified in the assistance agreement work plan;
  - The reasons why anticipated outputs/outcomes were not met (if applicable); and
  - other pertinent information, including, when appropriate, analysis and explanation of cost overruns or high unit costs.
- Any technical or administrative assistance needed from EPA.

In addition to the semiannual reports, the recipient agrees to submit to the EPA Project Officer within 90 days after the expiration or termination of the approved project period a final report and at least one reproducible copy suitable for printing. The final report shall document project activities over the entire project period and shall include information on each of the following areas:

- a comparison of actual accomplishments with the anticipated goal and task level outputs and/or outcomes specified in the assistance agreement work plan and the QAPP (See Appendix D);
- the reasons why anticipated outputs/outcomes were not met (if applicable); and
- other pertinent information, including, when appropriate, analysis and explanation of cost overruns or high unit costs. The recipient agrees to notify EPA of problems, delays, or adverse conditions that materially impair the ability to meet the outputs/outcomes specified in the assistance agreement work plan.

Final Financial Status Report

As indicated in Section VI – 2, award recipients must submit a final Financial Status Report (FSR) to EPA within 90 days after the end of the project budget period.

VI-4. Dispute Resolution Provision

Assistance agreement competition-related disputes will be resolved in accordance with the dispute resolution procedures published in 70 FR (Federal Register) 3629, 3630 (January 26, 2005) which can be found at http://a257.g.akamaitech.net/7/257/2422/01jan20051800/edocket.access.gpo.gov/2005/05-1371.htm. Copies of these procedures may also be requested by contacting Rebecca Moser (202-566-1697) at moser.rebecca@epa.gov. All other disputes will be resolved in accordance with EPA regulations at 40 C.F.R. §30.36 or 40 C.F.R. §31.70, as appropriate.

VII. Agency Contacts

General information about the Exchange Network Grant Program and past awards is available at http://www.epa.gov/exchangenetwork/grants/index.html. The primary EPA Headquarters point of contact is Rebecca Moser, the Exchange Network Grant Program Manager. Contact information is as follows: Office of Information Collection, Office of Environmental Information, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW, Mail Code 2823-T, Washington, DC 20460; phone, 202 -566-1679; email, moser.rebecca@epa.gov.

VIII. Other Information

VIII-1. Exchange Network References

The following Websites and documents may be of interest to assistance agreement applicants and other Exchange Network partners:

- Exchange Network Grant Program:
  http://www.epa.gov/exchangenetwork/grants/index.html
  See state and tribal activities for examples of previous Exchange Network activities.
- Central Data Exchange (CDX): http://www.epa.gov/cdx
  This site provides information about CDX, which is EPA's node on the Exchange Network.
- Environmental Data Registry: http://www.epa.gov/edr
  This site provides information on XML schema and data standards and a link to the XML Registry.
- Exchange Network: http://www.exchangenetwork.net
  This site provides more information on current Exchange Network documents, nodes, data flows, and includes the Registry of XML Schema.
- State/EPA Network Blueprint Team, *Blueprint for a National Environmental Information Exchange Network*, report to the State/EPA Information Management Work Group, October 20, 2000
  http://www.epa.gov/OEI/imwg/pdf/final_blueprint.pdf

- State/EPA Information Management Workgroup, National Planning Action Team, *Exchange Network Business Plan*, March 15, 2005. http://www.epa.gov/exchangenetwork/publications/exchangenetworkbusinessplan.pdf
- The Environmental Data Standards Council: http://www.envdatastandards.net/ . This website provides authoritative information on data standards and related information.

VIII-2. Other EPA Financial Assistance Programs

EPA offers a number of other financial assistance programs at various times of the year that may be of interest to states, territories, tribes, and tribal consortia. General information about financial assistance programs can be found on the Office of Grants and Debarment website at http://www.epa.gov/ogd.

Additional information can be found at the following websites:

- American Indian Environmental Office (AIEO): http://www.epa.gov/indian/tgrant.htm
- Office of Air and Radiation (OAR): http://www.epa.gov/air/grants_funding.html
- Office of Enforcement and Compliance Assurance (OECA): http://www.epa.gov/compliance/state/grants/stag/index.html
- Office of Prevention, Pesticides, and Toxic Substances (OPPTS)/Office of Pollution Prevention and Toxics (OPPT): http://www.epa.gov/oppt/p2home/grants/ppis/ppis.htm
- Office of Solid Waste and Emergency Response (OSWER)/Brownfields Cleanup and Redevelopment: http://www.epa.gov/brownfields/pilot.htm
- Office of Water (OW): http://www.epa.gov/water/funding.html

Appendix A

Definitions

Environmental Information Exchange Network
The Exchange Network is an Internet and standards-based information network among EPA and its partners in states, tribes, and territories. It is designed to help integrate information, provide secure real-time access to environmental information, and support the electronic storage and collection of high-quality data and information. The Exchange Network provides a more efficient way of exchanging environmental information at all levels of government. It significantly improves the way EPA and its state/territorial/tribal partners send and receive information.

Central Data Exchange (CDX)
EPA's CDX is the point of entry on the Environmental Information Exchange Network (Exchange Network) for environmental data submissions to the Agency. CDX provides the capability for submitters to access their data through the use of web services. CDX enables EPA and participating program offices to work with stakeholders - including state, tribal and local governments and regulated industries - to enable streamlined, electronic submission of data via the Internet.

Construction
Construction is the erection, building, alteration, remodeling, improvement, or extension of buildings, structures or other property. Construction also includes remedial actions in response to a release, or a threat of a release, of a hazardous substance into the environment as determined by the CERCLA of 1980.

Data Standard
A data standard depicts the required content and format in which particular types of data are to be presented and exchanged. Exchange Network partners are strongly encouraged to must data standards that have been approved by the Environmental Data Standards Council (EDSC). A list of EDSC-approved data standards is shown in Appendix C. Also see information at http://www.envdatastandards.net. Information on EPA's implementation of EDSC-approved data standards is available on the Environmental Data Registry Web site, http://www.epa.gov/edr.

Data Element
A data element is the smallest unit of information stored in and exchanged among Exchange Network partners' information systems. Examples of data elements are the facility name, DUNS number, and inspection date.

Data Exchange Template

A data exchange template is a standardized format that identifies the types of information required/allowed in a particular document or data exchange. Data exchange templates contain no data, but they define the format for exchange according to data standards and trading partner agreements.

Extensible Markup Language (XML)

Extensible Markup Language is a flexible language for creating common information formats and sharing both the format and content of data over the Internet and elsewhere. XML, a formatting language recommended by the World Wide Web Consortium (W3C). For guidance on the development of XML schema for the Exchange Network or related activities of the Technical Resource Group (TRG), see the Exchange Network website at http://www.exchangenetwork.net.

Flow Configuration Documents (FCDs)

FCDs identify and standardize the minimum information needed by trading partners to execute a data exchange. They describe the technical configuration and business processes used to exchange data between trading partners.

Geographic Information Systems

Geographic Information Systems (GIS) include software and hardware systems that relate and display collected data in terms of geographic or spatial location. GIS allow users to collect, manage, and analyze large volumes of geospatial data and metadata. EPA and its partners use GIS systems to conduct complex environmental analyses.

Geospatial Data

Geospatial data are data that identify, depict, or describe the geographic locations, boundaries, or characteristics of the Earth's inhabitants or its natural or human-constructed features. Geospatial data include geographic coordinates (e.g., latitude and longitude) that identify a specific location on the Earth; data that are linked to geographic locations or have a geospatial component (e.g., socio-economic data, land use records and analyses, land surveys, homeland security information, environmental analyses). Geospatial data may be obtained using a variety of approaches and technologies, including things such as surveys, satellite remote sensing, Global Position System (GPS) hand-held devices, and airborne imagery and detection devices.

Geospatial Technologies

Geospatial technologies include the computer hardware and software that are commonly used to collect, import, store, manipulate, analyze, and display digital geospatial data. These technologies include GIS, global positioning systems (GPS), remote sensing, and visualization systems.

In-Kind Services
Services provided by contractors and consultant on specific parts of the project for the recipient. The recipient can request this type of service as part of the grant proposal. However, EPA reserves the right to decide whether or not in-kind services will be provided. The recipient may not direct the work provided through in-kind services. These services are managed by EPA.

Integrated Project Team
A group of individuals comprised of state and EPA staff, support contractors and technology vendors organized to design and implement a specific flow.

Metadata
Metadata are data or information that describes other data. Examples include data that describe how or where the data were collected, whether or not the data comply with agreed-upon data standards, or how the data will be used.

Network Authorization and Authentication Services
Network Authorization and Authentication Services (NAAS) are a set of centralized information security services that Exchange Network partners can use to authenticate and authorize their users. NAAS provides an efficient way for Exchange Network participants to exchange data with many trusted partners, without them each having to authenticate and authorize each user themselves. All NAAS operations are conducted over a Secure Socket Layer (SSL) channel using 128-bit encryption.

Network Data Area Strategy (NDAS)
A Network Data Area Strategy (NDAS) is an approach to identifying clear and replicable Exchange Network-enabled solutions to programmatic business needs. NDAS are frameworks used to connect business information needs to the capabilities of the Exchange Network. The key product of a successful NDAS is a vision of business information opportunities and their practical, Exchange Network solutions.

Node
A node is a Web server (hardware with appropriate software) that provides a point for exchanging information over the Internet. Exchange Network nodes can gain access to and transmit information using Web services. In order to achieve interoperability among nodes, all nodes must be set up according to the Exchange Network specifications. Specifications and protocols for building a functioning Exchange Network node are available at http://www.exchangenetwork.net.

Node Client
A node client is an application (software code) that can generate Web service messages using the Exchange Network. A node client can do the following:

- Submit data to EPA or other partners using the Exchange Network;
- Request data from EPA or other partners using the Exchange Network; *and*

- Receive data from EPA or other partners using the Exchange Network.

Unlike nodes, node clients can *not* publish data on the Exchange Network (i.e., they can not respond to data queries from other Exchange Network partners).

Operational Exchange Network Node

An Exchange Network node is *operational* if it meets all of the following criteria:

- Demonstrates *all* nine Exchange Network web methods – authenticate, solicit, query, get status, submit, notify, node ping, download, and node services (see *Exchange Network Node Implementation Guide v.1.0*, April 2003, http://www.exchangenetwork.net, Tool Box);
- Implements the minimum Exchange Network security practices (e.g., including the use of Network Authorization and Authentication Services);
- Submits data to EPA or other Exchange Network partners;
- Receives data from EPA or other Exchange Network partners; and
- Demonstrates ability to publish data to the Exchange Network by responding to specific data queries from authorized Exchange Network partners.

When developing Exchange Network nodes, applicants should refer to the Node Test Suite on the Exchange Network Web site. (See http://www.exchangenetwork.net and click on "Tool Box.") All Network nodes should pass the interoperability tests on this site. This site also contains technical specifications and protocols, as well as the implementation guidance developed by the Network Steering Board's Node 1.0 Workgroup.

Outcome

The term "outcome" means the result, effect or consequence that will occur from carrying out an environmental program or activity that is related to an environmental or programmatic goal or objective. Outcomes may be environmental, behavioral, health-related or programmatic in nature, must be quantitative, and may not necessarily be achievable within an assistance agreement funding period.

Output

The term "output" means an environmental activity, effort, and/or associated work products related to an environmental goal or objective, that will be produced or provided over a period of time or by a specified date. Outputs may be quantitative or qualitative but must be measurable during an assistance agreement funding period.

Schema

An XML schema defines the structure of an XML document. An XML schema defines things such as which data elements and attributes can appear in a document; how the data elements relate to one another; whether an element is empty or can include text; which types of data are allowed for specific data elements and attributes; and what the default and fixed values are for elements and attributes. The schemas can be found at http://www.exchangenetwork.net website. Click on Network Registry to find the XML registry.

Schematron

A schematron is an open source application that can create an XSLT stylesheet to validate XML documents by combining the XML schema and a file containing a set of business rules. The XSLT stylesheet is then used to validate the instance document and return a list of errors.

Web Form

A standard interface that can be downloaded from the Internet. A Web form contains text boxes for a user to enter data. Users can then submit the form (e.g., environmental reports) to the receiver.

Web Publishing

Web Publishing is a term that refers to using web services as a query mechanism against local databases. These data services publish databases as web services in an XML format. Once these data services are deployed, they can be used in a number of ways such as populating web pages, synchronizing data between sites, viewing data in a web service client, or building new sources of data into an integrated application. In other words, web publishing is a specific subset of the many possible types of web services. Other web service types include data submission, security, quality assurance, notification, and status.

Web Services

Web services are automated information services that are conducted over the Internet, using standardized technologies and formats/protocols that simplify the exchange and integration of large amounts of data over the Internet. They make it easier to conduct work across organizations regardless of the types of operating systems, hardware/software, programming languages, and databases that are being used.

Appendix B

Suggested Exchange Network Data Flow Activities

The Exchange Network Grant Program supports a variety of activities, including things such as the acquisition and development of computer hardware/software needed to connect to the Exchange Network; the development of common data standards, formats, and trading partner agreements for sharing data over the Exchange Network; and the planning, development, and implementation of collaborative, innovative uses of the Exchange Network. It also supports the standardization, exchange, and integration of geospatial information to address environmental, natural resource, and related human-health issues.

The success of the Exchange Network will ultimately depend on how EPA and its partners use the data and information that are exchanged to enhance decision-making and programmatic operations. EPA encourages all partners to use the Exchange Network to meet their business needs. This could include exchanging data that support national environmental systems, as well as data that support particular state/territorial/tribal needs. This Appendix outlines some of the data flow activities that applicants could consider when applying for the FY 2006 Exchange Network Grant Program.

I. Non-National System Data Flows

Applicants could propose to implement data flows that meet specific business needs. Such data flows could be regulatory or voluntary and occur between facilities and states/territories/tribes, among different agencies within a state/territory/tribe, between different states/territories/tribes, or between states/tribes/territories and EPA. These data flows could support environmental decision-making and operations at any level (e.g., federal, regional, state, local), address cross-cutting environmental issues, or support specific state/territorial/tribal environmental programs. One such example is Oregon's Department of Environmental Quality (ODEQ) implementation of Exchange Network data flows with other states and EPA national systems. ODEQ and Washington's Department of Ecology are jointly implementing a new data flow for the RCRA hazardous waste program, which involves developing appropriate XML schemas and mechanisms for exchanging the data. The two states can now compare their hazardous waste generator records, including transfer, storage, and disposal receipt records. The Oregon Department of Environmental Quality project was supported by the Exchange Network infrastructure that was sustained by the Grants program. Another example of such a data flow might be one that supports an environmental performance self-certification program or other performance-based program. Another example of such a data flow might be one that supports regional environmental decisions, programmatic operations, or initiatives.

Applicants could also propose to implement geospatial data and tools to flow environmental information. Exchange Network partners could play an important role in helping the geospatial community at large realize the benefits of building interoperable solution to share and re-use data. By adhering to applicable geospatial standards and measurement guidelines for metadata creation and publishing, and by implementing Open Geospatial Consortium (OGC) compliant web mapping service capabilities, network partners can take important steps to ensure the development and maintenance of shareable geospatial data resources. To avoid duplicative data acquisitions, applicants can utilize the existing cataloged information available in the Geospatial One Stop (GOS) portal (http://www.geodata.gov) prior to buying, creating or collecting geospatial data needed for proposed projects. Once projects are underway, partners can create metadata about geospatial datasets acquired and publish their existence through registration at the GOS portal.

II. National System Data Flows

Applicants could propose to implement one or more of the following data flows. These flows are organized by media:

Air

- Air Quality System (AQS)
- National Emissions Inventory (NEI)

Office of Enforcement and Compliance Assurance (OECA)

- Air Facility System (AFS)
- Electronic Document Repository –
  Clean Air Act (CAA) Compliance/Enforcement/Permitting Documents
- Integrated Compliance Information System – National Pollutant Discharge Elimination System (ICIS-NPDES)
- Electronic Discharge Monitoring Reports (e-DMR)

Waste

- Resource Conservation and Recovery Act Information System (RCRAInfo)
- Institutional Controls Tracking System (ICTS)

Water

- Safe Drinking Water Information System (SDWIS) / Federal Vision
- Source Water Protection (SWP) Data Exchange
- Water Quality Monitoring Data Exchange (STORET)
- e-Beaches
- Water Quality Standards
- Integrated Reporting/Assessment Database
- National Hydrography Dataset /Reach Address Database
- Underground Injection Control (UIC) Database

Other

- Facility Registry System (FRS)
- National Pollution Prevention (P2) Results System
- Toxics Release Inventory System (TRIS)

Each of these national environmental information systems and/or data exchanges is briefly described below, along with related EPA program office information and suggested activities that applicants may wish to consider proposing.

OFFICE OF AIR

Air Quality System

System Description:
AQS is a national database that contains ambient air quality monitoring data collected by state, tribal, and local governments. This information is used to determine compliance with clean air standards, assess the nature of air pollution problems in North America, and assess the exposure of humans to toxic and other airborne pollutants. AQS currently receives data from all 50 states plus several territories, about 30 local agencies, and many tribes. The data volume that flows into AQS is large, with thousands of submissions per year containing about 75,000,000 discrete data points.

Status and Plans:

- Flat File: The transfer of AQS flat files via CDX began in July 2003.
- XML Schema: The XML schema for AQS submissions version 1.0 was released in November 2004. Version 2.0, with changes to keep up with system modifications will be released in summer 2005. The AQS schema will be augmented with structures for submitting queries to AQS (the "query" schema) and for containing AQS outputs (the "publishing" schema).
- CDX exchanges of XML data: CDX web submission of AQS XML data was implemented in June 2005.
- Node-to-node data exchanges: It is anticipated that AQS will be capable of accepting submissions via node-to-node transfers by the fall of 2005.
- Other activities: In late 2005, EPA expects to deploy Web services via CDX that support limited stakeholder queries of AQS data.

Air Quality System Office of Air and Radiation							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**					
		FY 2006		**FY 2007**		**FY 2008**	
Develop XML schema for AQS submissions	FY 2005 (1st half)	X					
Accept AQS submissions in XML format through CDX and continue to support AQS schema enhancements	FY 2005 (2nd half) then ongoing		X	X	X	X	X
Test node-to-node data exchanges	FY 2005 (2nd half)		X				
Support operational node-to-node data exchanges	FY 2005 (2nd half) the ongoing		X	X	X	X	X
Publication and test of web services for limited data retrieval from AQS in XML	FY 2005 (2nd half)		X				
Support of web services for data retrieval from AQS and continued development of publishing schema	Ongoing		X	X	X	X	X

Suggested Activities for Exchange Network Partners:
The primary goals of AQS-related Exchange Network activities include the following:

- Increase the timeliness of data submissions,
- Remove barriers keeping data that have already been collected from getting into AQS, and
- Increase the opportunities for collaborative analysis of air quality data.

The timeliness of data can be increased by automating more of the existing steps in the transfer of data from the collecting instrument to the collecting agency and from there to AQS. EPA also believes that there are large backlogs of data, particularly toxicant and visibility that have been collected but not put in a suitable electronic format and submitted to EPA. New processes or tools that focus on eliminating and alleviating this backlog would be of great benefit. Finally, as more and more air quality data are available, consistency in analytical approaches is essential if control agencies, regional planning bodies, and scientists are to collaborate. EPA is also interested in making existing analytical tools at an agency available via a Web service using the input from the AQS XML format. Other examples of needed analytical tools include trends statistics, correlation and autocorrelation results, trajectory analysis, deterministic models, and heuristic models. Any tools provided must be made available within the public domain.

Specific examples of projects that partners should consider, but are not limited to, the following:

- Develop node-to-node data transfer flows that use the AQS XML schema, particularly for submitting data to AQS. The Exchange Network node-to-node concept makes more timely submissions possible. AQS has quarterly submission deadlines that are usually, but not always, met. EPA's goal is to facilitate one-hundred percent deadline compliance. Any manual steps in the process of getting data from the monitors where it is collected, to AQS, may cause delays. Some examples of delays are the requirement for some atmospheric samples to be sent to laboratories for analysis, or for internal review processes at agencies. Projects addressing how to make use of XML formats and transfer mechanisms to speed submissions are highly desirable. This includes data flows upstream of AQS relating to all steps involved in getting information from the monitor to the collecting agency's node, i.e., through the measurement device (analyzer, chromatograph, etc.), to and from analyzing laboratories, etc.
- Develop procedures that leverage the tools provided by the Exchange Network to increase the quality of data submitted to AQS. For example, perform on-site schema validation of AQS XML transaction sets prior to submitting them to the EPA. This will identify file structure, format, range, and code-list problems prior to data being processed by CDX or AQS. Schema conformity validation performed at an agency can significantly cut down on the amount of erroneous data rejected by AQS, improving data quality.
- Work with EPA to develop Web services and applications that use AQS XML schema to enhance the timeliness, frequency, and/or efficiency of air quality data transmissions to EPA (e.g., possibly including real-time data transmissions).

- If significant air quality data assets are not currently in AQS, develop an approach for using the Exchange Network to allow partners to share the data. For example, if large amounts of non-regulatory data collected by monitoring networks (e.g., visibility, meteorological, or toxicant data) reside at a node site, develop the data flows for sharing these data.

Air Quality System Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2007		**FY 2008**	
Design, develop, and test Exchange Network node	Any time in window	X	X	X	X
Submit production AQS data using the Exchange Network node	Any time in window	X	X	X	X
Publish web services for which AQS XML data is an input and an analytical product is the output.	Any time in window	X	X	X	X
Test and implement upstream flows that improve the timeliness or completeness of collected air quality data submissions to AQS	Any time in window	X	X	X	X

National Emissions Inventory

System Description:
NEI is a national database of air emissions information, which includes input from numerous state and local air agencies, tribal nations, industry, and other federal databases [e.g., EPA's Clean Air Markets Division (CAMD) Emission Tracking System, Maximum Achievable Control Technology (MACT) Program, and the Toxic Release Inventory (TRI)]. The NEI database contains information on stationary and mobile sources that emit criteria air pollutants and precursors, as well as hazardous air pollutants (HAPs). NEI data are used for air dispersion modeling; tracking emission trends; and developing risk assessments, regulations, and regional pollution control strategies.

The state, local, and tribal air agencies have data collection programs with regulated facilities; and these data make up the stationary point source sector of the emission inventory. State, local and tribal agencies maintain their own database storage and handling systems to compile the point and non-point portions of their local inventories. These agencies transfer data to NEI as stationary point sources, stationary non-point sources, and mobile sources. The national Consolidated Emissions Reporting Rule requires that state and local agencies provide criteria pollutant emissions data to EPA by

June 1 of each year, which include point-source data (annually) and a complete report on both point and non-point sources (every three years). Currently, there are two acceptable formats for transferring data to NEI, i.e., the NEI Input Format (NIF) and the NEI XML schema. The structures of these formats are different, but the data content is the same.

The NEI data collection objectives include the following:

- Utilize and maintain standard file transfer formats with trading partners;
- Document required data standards and quality measures to potential trading partners;
- Adopt resource-efficient approaches to reduce format and content errors in the files received; and,
- Reduce the data transfer cycle time between the regulated facilities (point sources); state, local, and tribal air agencies; and EPA.

The Exchange Network supports these objectives by promoting technology- and process-based solutions to improve data quality, integrate data from different sources, and reduce reporting burden for regulated entities, as well as states/territories/tribes. Some of the tools available to Exchange Network partners include XML schema; CDX validation and quality control routines; EDSC-approved data standards; EPA data standards; and automated, rapid notifications of file receipt, error findings, and required corrective actions.

Status and Plans:
During FY2005, EPA solicited feedback from the NEI data trading partners on possible improvements to the NEI data collection format(s) to enable easier and more convenient data transfers. The result of this feedback is the issuance of the new data transfer format, NIF 4.0. NIF 4.0 introduces the use of Point-Lite, which is a simplified version of the Point data format, as well as many other enhancements requested by trading partners. The anticipated uses of this include: non-major point sources, site-level HAP submissions, airport Landing and Take Off data, feedlot air emissions, etc. Additionally, a Pass/Fail system was proposed and will be implemented in time for the 2005 NEI. This system will not permit data files to be passed through CDX without meeting minimum requirement standards. In addition, in FY 2005 EPA is conducting a Rapid Inventory Development Pilot Project with several agencies to test and model the expectation that the time it takes agencies to collect the data from facilities, and eventually transfer the data to EPA may be dramatically reduced. (See suggested activities below.)

In FY 2006, EPA will conclude its findings of the Rapid Inventory Development Pilot and will also conduct testing in the new format and Pass/Fail system with volunteer trading partners.

NEI Data Flow Office of Air and Radiation Office of Air Quality Planning and Standards							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**					
		FY 2005		**FY 2006**		**FY 2007**	
Solicit feedback from trading partners on data formats and automated QC criteria	Completed FY05						
Revise / update NIF & XML formats to NIF 4.0, implement Pass/Fail System and publish for use in subsequent NEI data collection cycles	FY 2006 (1st half)		X	X			
Test updated XML schemas and pass/fail system with volunteer trading partners.	FY 2006 (2nd half)			X	X		
Test node-to-node data exchanges with participating trading partners	Ongoing		X	X	X	X	X
Support operational node-to-node data exchanges at CDX	Ongoing		X	X	X	X	X

Suggested Activities for Exchange Network Partners:
Applicants applying for the Exchange Network Grant for FY 06 may wish to consider implementing approaches/processes to improve the quality of data in state emissions inventory data systems, including the following:

- Develop and implement routine NEI data transfers using the XML schema with automated format validation and data quality control processes. The objective would be to validate the XML file at both the local point of generation of the data and at CDX.
- Develop and implement technical approaches to integrate now-separate data systems and data exchanges for criteria and HAP emission data, so that pollutant emissions are reported together over the Exchange Network on a consistent process/unit basis.

Success would be demonstrated by the timely correction of format and content efforts and an error-free CDX validation report by the data submission date of June 1, or earlier. Success could include participation in the development of technical approaches to confirm correct file formatting and data content (i.e., consistent with NEI data content requirements) prior to transferring the data over the Exchange Network, as well as after the data are submitted to EPA through CDX.

If proposing to exchange significant emissions data assets that are not currently in the NEI, applicants should describe the data flow, the business case for such a flow, and the

approaches that would be used to provide other Exchange Network partners with secure access to the data (including documentation on data quality checks).

NEI Data Flow Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2006		**FY 2007**	
Incorporate EPA/NEI data collection standards into state information system	FY 2006 (1st half)	X			
Map information system data to the NEI XML schemas and integrate extended QC checks	FY 2007 (1st half)	X	X	X	
Design, develop, and test Exchange Network node	FY 2007 (1st half)	X	X	X	
Test node-to-node NEI data flow and CDX validation	FY 2007 (1st half)		X	X	
Submit production NEI 2005 data using the Exchange Network node	By Dec 2006 or NLT Jun 1 2007 FY 2007 (2nd half)			X	X

Other suggested activities

There are other activities that build upon previous and pending NEI data flow projects and on EPA's objectives of reducing the amount of time it takes to report data from 1) regulated facilities (point sources); 2) to state, local, and tribal air agencies; and 3) to EPA. In FY 2005, EPA is conducting a Rapid Inventory Development Pilot Project with several air agencies to demonstrate the potential for shortening the time required to obtain a complete year of NEI data to twelve months.

Suggested NEI activities that could benefit from group collaboration might include the following:

- Acknowledging and building on the results of the EPA and state Rapid Inventory Development Pilot Project; and
- Developing approaches and tools to shorten the time required for facilities to submit quality-reviewed NEI point source data, using XML schema and quality control validation routines.

Successful projects could result in the development of "toolkits" that could be used by other agencies and regulated facilities to facilitate the reporting of NEI data. The

experiences of some states that are already receiving Web-based emissions reports from regulated facilities indicate that it may be possible to achieve substantial reductions in the amount of time required to transfer data from facilities to the states and then from states to EPA. EPA believes that it may be possible for it to receive quality-reviewed NEI reports within six to ten months from the end of the calendar year.

NEI Data Flow
Suggested Activities for Exchange Network Partners

Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2006		**FY 2007**	
Design options for process and tools solution that is aligned with practical findings from the EPA/ State Rapid Inventory Development Pilot	FY 2006 (2nd half)	X	X		
— Select best solution that may be made readily available and adapted to by broader NEI data exchange community — Validate community acceptance and technological capacity to implement — Test real application scenarios including performance of data QC checks, and document results	FY 2007 (1st half)	X	X	X	
Demonstrate and apply the tool solution by testing data transfer from facility to state, and to EPA through Exchange Network; confirm quality checked data results	FY 2007 (1st half)		X	X	
Integrate tool solution and data flow process into state systems	FY 2007 (1st half)		X	X	
Submit production NEI 2005 data using the Exchange Network node	By Dec 2006 FY 2007 (1st half)			X	

OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE

Air Facility System

System Description:
AFS is a mainframe system written in NATURAL and ADABAS that houses EPA's air compliance and enforcement information for stationary sources. Information provided to AFS includes compliance activities and determinations, and enforcement activities. EPA uses this information to assess progress toward meeting emission requirements developed under the authority of the Clean Air Act (CAA) to protect and maintain the atmospheric environment and the public health.

Status and Plans:
AFS was formerly known as AIRS-AFS, or the Aerometric Information Retrieval System, Air Facility Subsystem when operated by the Office of Air Quality Planning and Standards. Since 2001, AFS has been owned and operated by the Office of Enforcement and Compliance Assurance, specifically run by the Office of Compliance. AFS is scheduled for modernization through integration into ICIS, with planning and design activities scheduled to start in FY07. The start date for AFS modernization is dependent upon the finish date of ICIS Phase 2.

To prepare for modernization, AFS plans to formulate an XML schema that can be used in the current version of AFS, then updated after modernization and integration into ICIS. This effort is undertaken to assist those users wanting to complete their data reporting schemas for all media reporting.

In order to facilitate reporting for states batching information to AFS, EPA has created and maintains a software application to convert state/local data to AFS format. The Universal Interface (UI) is a stand-alone desktop application and is currently used by 16 agencies and has proven to reduce reporting burden by negating costs of maintaining expensive conversion programs. The Office of Compliance will be awarding a grant under a separate solicitation to develop an XML-based UI that supports electronic reporting using a format that will be consistent with EPA standards for using the CDX as a center for data exchange. It is anticipated that this project will take approximately 24 months to complete. Milestones provided by this project are included in the tables below.

Air Facility System Office of Enforcement and Compliance Assurance Office of Compliance							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**					
		FY 2006		**FY 2007**		**FY 2008**	
Incorporate approved data standards into national information system	Ongoing	X	X	X	X	X	X
Create a workgroup to develop an XML schema for AFS	FY 2007 (2nd half)		X	X	X		
Begin work to develop an XML schema for AFS to revise the state interface tool (UI)	FY 2007 (2nd half)		X	X	X		
Begin modernization efforts to merge AFS with ICIS (planning, design, development)	FY 2008 (2nd t half)					X	X

Suggested Activities for Exchange Network Partners:

Exchange Network Partners may participate in the formulation and testing of XML schemas to prepare their systems for the change in format from flat files to XML data. Applicants can request funding for complying with national data standards and data conversions, to include enhancements to the UI in order to facilitate reporting. Additionally, grant applicants should ask for assistance in applying schema formats to their existing AFS data submissions, testing, and quality control activities. Emphasis should be placed on the providing an accurate universe of sources to AFS, compliance status accuracy, ensuring required activity is included in updates, and providing data in a timely manner.

Air Facility System Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2005-funded grants)**			
		FY 2007		**FY 2008**	
Incorporate approved data standards into AFS reporting, to include revisions/enhancements to the UI.	FY 2007 or FY 2008	X	X	X	X
Participate in the design and development of an XML schema for AFS reporting	FY 2008 (1st half)		X	X	
Map system data to the AFS XML schema	FY 2008 (2nd half)		X	X	X
Participate in the planning, design, and development of the modernization of AFS to include updating needs assessment materials, closeness of fit to existing systems, structure and design	FY 2008 (2nd half)		X	X	X

Electronic Document Repository – CAA Compliance/Enforcement/Permitting Documents

System Description:
The Agency and many states have traditionally relied on national databases (e.g., AFS and ICIS) to manage the compliance and enforcement (C/E) programs. States have been required to report their C/E activities into AFS. These databases have provided significant levels of information critical to the Agency's and states' knowledge of the regulated universes of facilities, compliance status, as well as lists of inspection and enforcement actions conducted. However, over the past several years many stakeholders, both inside and beyond regulatory agencies, have requested a more substantial level of detail regarding the actual environmental requirements of permits, self-certification/monitoring reports and enforcement actions. These requests for documents have come from a broad scope of stakeholders, including the general public, industry, inspectors and enforcement managers. Most recently, requests and support for this capability have come from EPA/State inspectors and from both environmental and industry groups during the ECHO public comment period.

The Online Targeting Information System/Enforcement and Compliance History Online (OTIS/ECHO) web interfaces, over the past three years or more, have provided highly detailed and easy access to all concerned groups (e.g., states/local agencies, general public and industry, EPA inspectors/managers, etc.). These interfaces have also provided easy access to several types of permit and monitoring documents where available (e.g., NPDES permits and DMRs). The development of a national schema (e.g., metadata),

along with a repository for CAA 'targeted' documents will allow a simple linkage in OTIS/ECHO. A requestor will then be able to query and observe the detailed 'context' held within these documents linked to the 'action-level' data provided by AFS/ICIS.

Status and Plans:
OECA developed a document repository for EPA only enforcement documents for all major media in FY03. Also, in FY 03 the NPDES program and OEI jointly developed a repository of NPDES major permit documents. In FY 04, OTIS/ECHO provided links to these documents. OECA is planning on storing documents related to CAA Title V (e.g., permits, permit support documents, Annual Certifications, semi-annual monitoring reports, etc., where appropriate) within the Agency's Enterprise Content Management System (ECMS), the current EPA repository. OECA has coordinated with OEI regarding the technical methods of making this information available to the public. Most recently, the state of New York has been awarded an OECA State and Tribal Assistance Grant, which in addition to the development of an XML schema for all CAA Compliance/Enforcement Medium Density Residential data, includes the development of electronic certification reports and submission by facilities to the state, creation of a state electronic document repository, and reporting compliance/deviation data to EPA's AFS system.

OECA plans on developing a methodology whereby access to these documents may be efficiently provided through linkage to OTIS/ECHO. The ultimate goal will be to establish a CDX 'portal' whereby states/Regions may exchange their documents via the CDX in XML formats. This may be realized during the AFS modernization project currently scheduled in FY'08 when a 'portal' is established to support the AFS system.

Electronic CAA Document Repository Office of Enforcement and Compliance Assurance Office of Compliance							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**					
		FY 2006		**FY 2007**		**FY 2008**	
Identify and incorporate new CAA ICR MDRs into OTIS/ECHO	Ongoing	X	X	X	X	X	X
Develop Concept Paper to identify how targeted documents in ECMS may be linked to critical CAA MDR data in OTIS/ECHO	FY 2006 (1st half)	X					
Coordinate with AFS Modernization WG	FY 2006 (Ongoing)	X	X	X	X	X	X
Scope options for ECMS to interact with OTIS/ECHO and AFS/ICIS	FY 2007 (1st half)			X			
Coordinate and support efforts to pilot ECMS and linkage to OTIS/ECHO	FY 2007 (2nd half)				X	X	X
Develop linkage to OTIS/ECHO to state/local/regional documents	FY 2008 (1st half)					X	X
Establish document data flow thru one of following methods: CDX 'portal' established for the modernized AFS, OEI Web Services CDX Archive1, or other server to be determined	FY 2008 (2nd half)						X

Suggested Activities for Exchange Network Partners:

EPA would like to promote opportunities for states to provide important compliance, enforcement and permitting documents to the public and internal stakeholders through the Exchange Network and is now soliciting proposals.

Electronic CAA Document Repository Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2007		**FY 2008**	
Work Plan developed and contractor selected	FY2007 (1st half)	X			
Participate in AFS Modernization WG	FY2007 (Ongoing)	X	X	X	X
Work with ECMS Metadata and policy workgroups to document 'metadata' and XML schema	FY2007 (2nd half)		X		
Pilot Document Repository on State server	FY2007 (2nd half)		X	X	X
Test and implement upstream flows that improve the timeliness or completeness of collected targeted documents	FY2008 (1st half)			X	X
Test CDX XML data flow of targeted CAA documents from 'pilot states' through one of following methods: CDX 'portal' established for the modernized AFS, OEI Web Services CDX Archive1, or other server to be determined	FY2008 (2nd half)				X

Electronic Discharge Monitoring Reports

System Description:
Under the Clean Water Act (CWA), facilities with NPDES permits submit DMRs periodically (normally monthly). EPA Regions and states provide a pre-printed DMR form to facilities. The information on this form has historically been manually typed into EPA's Permit Compliance System (eventually ICIS-NPDES) by EPA and state personnel. Because of the volume and complexity of the data, EPA and the states have not had the resources to put all of the submitted information into the data system – particularly for non-major facilities. A generic e-DMR tool would provide an interface to allow permitted facilities to submit information automatically via a secure, authenticated Internet site. Automated entry of DMRs would also provide a burden reduction to the regulated community. Additionally, other government agencies, such as the Internal Revenue Service, have seen significant data quality improvements when automated applications transmit data (compared to manual data input from a hard copy). As part of the Exchange Network the e-DMR tool could be used by facilities in states that are both direct and non-direct users of ICIS-NPDES.

The e-DMR approach will reduce the burden on states and EPA Regions to manually enter discharge monitoring data, and can save government agencies and the regulated community significant resources. This in turn allows EPA and states to focus more on

using the data to manage the NPDES program. Other government agencies that have converted to electronic reporting have also experienced significant data quality improvements over manual key punching. Knowing more about the pollutants discharged into our nation's water improves the ability of EPA and the states to implement the NPDES program to protect our nation's water.

Status and Plans:
EPA efforts to institute electronic reporting of DMRs date back to 1992, and the final work plan and strategy will continue to evolve as state involvement increases. In the past, the main obstacle to the development of an EPA e-DMR tool was the lack of a legal framework within which to authenticate data entry. However, the Cross Media Electronic Reporting and Recordkeeping Rule (CROMERRR) requirements are expected to provide the necessary guidelines on electronic signature and validation procedures.

As a result, the EPA Office of Enforcement and Compliance Assurance (OECA) is working with OEI to support the development of an e-DMR application that could automate DMR data flows from NPDES-permitted facilities to ICIS-NPDES. In December 2004, EPA completed a scoping paper to define the functions, requirements and challenges for designing, building and deploying a generic e-DMR tool that states and EPA Regions could easily adapt for their own use. This paper was developed with the help of EPA Regions and states. It is posted at **http://www.epa.gov/idea/netdmr/**.

EPA included e-DMR as a data flow eligible for grant funding under the 2005 Network Grant process. The 2006 Network Grant process continues the momentum on this project by providing a funding source for Exchange Network partners for electronic reporting. The 2006 grant process supports both states that are at the beginning of the process, and those that have completed their technical requirements and are ready to move applications into a production environment. EPA believes that the implementation of common shared tools and software through the Exchange Network will support state needs. As these tools become operational in the near future, the bridge between the e-DMR tool, the ICIS-NPDES database (which holds permit limits needed by the e-DMR application), and the Exchange Network will ensure the inter-operability of these tools, and will provide the ability for other partners to offer eDMR reporting at very little start-up cost.

ICIS-NPDES and e-DMR Tool EPA Office of Enforcement and Compliance Assurance							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**					
		FY 2006		**FY 2007**		**FY 2008**	
Concept Paper for e-DMR tool complete	FY 2005 (1st half)	X					
Continue ICIS-NPDES Data Migration activities in coordination with EPA Headquarters, Regions, states, and Data Migration Workgroup participants	Ongoing	X	X	X	X	X	X
ICIS-NPDES Software Development	Ongoing	X	X	X	X	X	X
ICIS 2.0 (NPDES) First wave release: Federal Enforcement and Compliance (FE&C) existing ICIS users and 7 direct (PCS) state users	FY 2006 (1st half)	X					
ICIS 2.0 (NPDES) Second wave release: 7 additional direct users	FY 2006 (2nd half)		X				
ICIS 2.0 (NPDES) Third wave release: remaining direct user states	FY 2006 (2nd half)		X				
CDX/state registry, CDX/state functionality testing, and CDX state data verification and acceptance	Ongoing					X	X
Start ICIS-NPDES testing of the receipt and processing of state data transmissions from states systems via CDX and the Exchange Network into the new ICIS-NPDES system, including e-DMRs	FY 2008					X	X
ICIS 3.0 (NPDES) Batch release: XML batch files (XML batch submissions via the Exchange Network)	FY2008						X

Suggested Activities for Exchange Network Partners:
EPA would like to promote the use of eDMRs for all states and other partners through the Exchange Network and is now soliciting proposals in two areas.

Area 1 - States that Use (or Will Use) ICIS-NPDES to Manage Their NPDES Program

EPA currently operates PCS, a legacy system that houses data (including discharge monitoring reports). This system will be replaced by the modernized ICIS-NPDES database starting in fiscal year 2006. Many states use PCS to manage the NPDES program in their state and/or plan to use ICIS-NPDES as to manage the NPDES program when it becomes available (often called "direct users"). States that are planning to use ICIS-NPDES to manage the NPDES program in their state AND would like to allow their permitted facilities to submit eDMRs are eligible to apply.

Applications should include provisions for building on the successes of Michigan, Illinois, and any 2005 Network Grant award recipients to create an application that works with the Exchange Network and ICIS-NPDES to receive and process electronic DMRs. This should include authentication procedures for permittees, an electronic signature capability that meets legal requirements, and a common Web-based application that can accept and process eDMRs XML schema using the Exchange Network and the ICIS-NPDES system. This will enable participating states to fully populate all major and minor permit limit and pipe information for facilities eligible to report their eDMRs (though this entry will be done within PCS and ICIS-NPDES). The software product and associated business rules should be a working application that will accept eDMRs from NPDES facilities in all the states participating in this grant program, as well as other states that are part of the Exchange Network. The application should be designed and built so that it can be easily modified to meet the critical unique needs of particular state NPDES programs. Grant applications may include the costs of requirements, design, development, and implementation. Costs should include in-kind services anticipated for designing and implementing any enhancements to ICIS-NPDES and CDX software or hardware associated with this tool.

Area 2 - Non-Direct Users or "Batch" Processing States

States that plan to use eDMRs with their own state databases (and then electronically flow the DMR data to ICIS-NPDES) should consider submitting proposals under Area 2. A state applicant should delineate how the grant/cooperative agreement would leverage existing applications (such as Michigan's system) and enhance the ability of the state to flow accurate and complete data for all NDPES facilities over the Exchange Network. Several states may want to collaborate and provide a combined proposal that would create an E-DMR application that could be easily used by multiple states.

e-DMR Tool Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2007		**FY 2008**	
Work plan developed and contractor selected	FY 2006 (1st half)	X			
System Specifications (Detailed Design)	FY 2006 (2nd half)		X		
Programming and System Development	FY 2007 (2nd half)			X	X
Testing with pilot facilities and completion of interface with ICIS-NPDES application	FY 2008 (1ST half)				X
Moving application into production (particularly for states that have received prior Network Grant funding for system development)	FY 2008 (2nd half)			X	

Integrated Compliance Information System – National Pollutant Discharge Elimination System

System Description:
ICIS-NPDES will be the modernized version of the PCS. It supports traditional wastewater discharge program functions (e.g., permitting, compliance monitoring, and enforcement), as well as new functions for special regulatory programs, such as concentrated animal feeding operations (CAFO). ICIS-NPDES will allow for data exchanges using XML and Web services via the Exchange Network and provide links to other EPA databases (e.g., FRS).

The Agency's ability of EPA and states to track compliance with the NPDES program will be significantly improved by the modernization of PCS. A modernized PCS is critical to the enhancement of EPA's and states' ability to manage the NPDES program. In contrast to legacy PCS, modernized PCS will contain more data on more of the sources that discharge pollutants into our nation's water (e.g., CAFOs and storm water). This expanded scope and the more robust functionality of modernized PCS will improve the ability of EPA and states to implement the NPDES program to protect our nation's water.

Status and Plans:
Over the last three years, OECA, the Office of Water (OW), and EPA Regions, in collaboration with state partners, have accomplished a significant amount of work on ICIS-NPDES (PCS modernization). The first three of the six phases of the Agency's

System Life Cycle process have been completed for ICIS-NPDES: Concept Definition, General Design, and Detailed Design. The fourth phase of the Life Cycle process, System Development, is well underway. The three completed phases were done with extensive participation from our users – states, EPA Regions, and Headquarters offices (OECA, OW, OEI) – via work groups, document reviews, and meetings.

Work Currently Underway:

- Began software development (July 2004)
- Data migration (ongoing): Data Migration Plan (April 2004); Data Migration Work Group formed (May 2004) including 17 state participants (AR, CO, CT, GA, HI, IN, LA, MD, MO, NJ, NY, OH, RI, SD, UT,VA, WI), all 10 EPA Regions, and EPA Headquarters offices (OW, OECA, and OEI)
- Software technical specifications completed on schedule (September 2004)
- Draft ICIS-NPDES XML Schemas completed and accepted by Technical Resource Group (TRG) for registration on the Exchange Network website (July 2005)

Key Future Milestones (all milestones contingent on FY06 and FY07 funding):

- March 2006: ICIS 2.0 (NPDES) First wave release: Federal Enforcement and Compliance (FE&C) existing ICIS users E&C and 7 direct (PCS) state users
- June 2006: ICIS 2.0 (NPDES) Second wave release: FE&C and 7 additional direct users
- September 2006: ICIS 2.0 (NPDES) Third wave release: FE&C and remaining direct user states
- December 2007: ICIS 3.0 (NPDES) Batch release: XML batch files (XML batch submissions via the Exchange Network)

ICIS-NPDES XML Schema:

The draft ICIS-NPDES schema was completed in March 2005. They were reviewed and accepted by the TRG in August 2005. It is anticipated that they will be registered on EPA's Exchange Network Registry found at www.exchangenetwork.net by the end of August 2005. In Spring 2008, ICIS-NPDES will be ready to begin testing the receipt and processing of test data transmissions from states via CDX into the ICIS-NPDES system. This assumes, however, that prior to Spring 2008, states have registered with CDX and have tested the functionality of submitting their test data to CDX and had have the data verified and accepted by CDX.

ICIS-NPDES (PCS Modernization) Office of Enforcement and Compliance Assurance Office of Compliance							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**					
		FY 2006		**FY 2007**		**FY 2008**	
Develop draft schema for ICIS-NPES XML data flow	FY 2005 (2nd half)						
Continue ICIS-NPDES data migration activities in coordination with EPA Headquarters, Regions, states, and Data Migration Workgroup participants	Ongoing	X	X	X	X	X	X
ICIS-NPDES software development	Ongoing	X	X	X	X	X	X
ICIS 2.0 (NPDES) First wave release: FE&C and 7 direct state users	FY 2006 (1st half)	X					
ICIS 2.0 (NPDES) Second wave release: FE&C and 7 additional direct users	FY 2006 (2nd half)		X				
ICIS 2.0 (NPDES) Third wave release: FE&C and remaining direct user states	FY 2006 (2nd half)		X				
CDX/state registry, CDX/state functionality testing, and CDX state data verification and acceptance	Ongoing					X	X
Start ICIS-NPDES testing of the receipt and processing of state data transmissions from states systems via CDX and the Exchange Network into the new ICIS-NPDES system	FY 2007					X	X
ICIS 3.0 (NPDES) Batch release: XML batch files (XML batch submissions via the Exchange Network)	FY 2008 (2nd half)						X

Suggested Activities for Exchange Network Partners:

The modernization of legacy PCS into ICIS-NPDES will affect all users of the system, but for purposes of this grant program, the focus is on those states that expect to electronically exchange data with ICIS-NPDES over the Network. Data exchanges can go both ways: from state systems into ICIS-NPDES, and from ICIS-NPDES to state systems. With regards to electronic exchanges, states may fall within four groups:

- States that currently submit traditional batch flat files from their state system to PCS and will electronically transfer batch NPDES data into modernized PCS (ICIS-NPDES) via CDX.
- States that currently use the Interim Data Exchange Format (IDEF) to submit files from their state system to PCS (or are scheduled to do so per agreement with EPA) and will electronically transfer batch NPDES data into modernized PCS (ICIS-NPDES) via CDX.
- States that rely exclusively on direct (manual) entry of data into PCS (i.e., no electronic transfers of any kind into PCS) and will electronically transfer batch data into modernized PCS (ICIS-NPDES) via CDX or the Exchange Network.
- States that anticipate the need to extract large amounts of data from ICIS-NPDES using the Network and then import this ICIS data into state databases or warehouses.

These four groups are not entirely distinct. Further, states that plan to electronically transfer data from a state system into ICIS-NPDES may also directly enter data into ICIS-NPDES. The FY2006 Exchange Network Grants Program is soliciting proposals from states in any of these four groups. Activities that support these data exchanges are set forth in the table below.

In addition, EPA expects that some states will need to be able to extract large amounts of data from ICIS-NPDES. States may then import this ICIS data into state databases or warehouses. These large data extractions from ICIS-NPDES may need to be done on an automated basis, with the capability for individual states to identify the particular data elements that need to be extracted from ICIS-NPDES at specified frequencies (e.g., monthly refreshes). While the Network and ICIS architecture should support these activities, both a software tool and business process need to be designed and built. EPA is soliciting applications from a group of states to design and build this capability. Grant applications should include the costs of requirements, design, and development. Costs should include in-kind services anticipated for designing and implementing any enhancements to ICIS-NPDES and CDX software and hardware associated with this tool.

ICIS-NPDES (PCS Modernization)
Suggested Activities for Exchange Network Partners

Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2007		**FY 2008**	
Obtain technical training and support for using XML	Ongoing	X	X	X	X
Extract and convert the data from state NPDES systems into the XML format needed to submit data to ICIS-NPDES	Ongoing	X	X	X	X
Modify state systems to accommodate the new/revised data requirements of ICIS-NPDES	FY 2007/FY 2008	X	X	X	X
Modify state data extraction/conversion software to accommodate new/revised ICIS-NPDES submission and transaction types (e.g., for special regulatory programs)	FY 2007	X	X	X	
Non-Direct State Users of PCS via Flat File Batch Processing – develop state XML schema export capability to generate XML data documents using the ICIS-NPDES schema	FY 2007	X	X	X	
Non-direct State Users of PCS via IDEF "Pass through" – modify state XML export capabilities to generate XML data documents using the ICIS-NPDES schema	FY 2007/FY 2008	X	X	X	
Implement node-to-node communications with CDX	FY 2007/FY 2008	X	X	X	X
Develop requirements and design for extraction tool to pull data out of ICIS-NPDES via the Network and import to state database	FY2007	X	X		
Develop and implement extraction tool	FY2008		X	X	X

OFFICE OF SOLID WASTE & EMERGENCY RESPONSE

Institutional Controls Tracking System

System Description:
Institutional controls (ICs) are non-engineered instruments such as administrative or legal controls that minimize the potential for human exposure to contamination by limiting land or resource use. ICs are an important component of federal, state, tribal, local government as well as industry lead cleanups. ICs help to minimize the potential for exposure to contaminants and protect the integrity of a remedy. The unique challenge that ICs present is that they are often implemented, monitored and enforced by different parties during the cleanup. Also, these different entities often have overlapping implementation, monitoring and enforcement responsibilities.

Status and Plans:
Implementing ICs at contaminated sites is a common and ever-increasing practice across both cleanup programs and across agencies. To ensure the long-term durability, reliability, and effectiveness of ICs throughout their life-cycle, proper management and tracking of IC information must occur. The need to track ICs using IC management systems and tools has prompted the development of an IC data standard necessary to transfer this information consistently between parties.

Data standards promote efficient sharing of environmental information between EPA, state, and tribal partners. The IC standard defines the elements required for describing IC information. It provides information about the implementation, monitoring, enforcement, and termination of instruments (via the IC event), as well as the objectives they meet, associated locations, affiliates and their roles/responsibilities in the IC, cleanup actions (via the IC event), technologies, and the documentation related to each of the aforementioned subsets of data. The IC standard would be applicable to:

- Cataloging and exchanging information about IC instruments, objectives, locations, and engineering controls;
- IC instrument, objective, location, and engineering control datasets and dataset interchange; and,
- XML schemas relating to transferring/cataloging data related to IC instruments, objectives, locations, and engineering controls.

This IC standard defines:

- Data elements that describe IC instruments, objectives, locations, and engineering controls; and
- Ancillary information that may be needed to accompany IC data. Though this standard is applicable to digital data, its principles can be extended to other forms of data such as textual documents.

Institutional Controls Tracking System Office of Solid Waste and Emergency Response Office of Superfund Remediation and Technology Innovation							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Planned Activities**					
		FY 2006		**FY 2007**		**FY 2008**	
Finalize National IC Data Standard, XML Schema and XML tags	FY 2006 1st half	X					
Finalize ICTS CDX File Transfer and Web-based data entry	FY 2065 (1st half)	X					
Finalize and test Business Process Approval Procedure	FY 2006 (1st half)	X					
Identify and evaluate potential trading partner databases for data standard integration	FY 2006 (1st half)	X	X	X	X	X	X
Develop IC data standard implementation plans and implement necessary activities	FY 2005 (1st half)	X	X	X	X	X	X
Establish Trading Partner Agreements	FY 2005 (2nd half)		X	X	X	X	X
Test node-to-node (State-to-EPA) data exchanges	FY 2005 (1st half)		X	X	X	X	X
Support operational node-to-node (State-to-EPA) data exchanges	FY 2005 (2nd half and ongoing)		X	X	X	X	X

Suggested Activities for Exchange Network Partners:

Applicants are encouraged to submit applications for assistance in incorporating and/or mapping to the IC standard/schema into their existing systems, developing standard integration plans, negotiating Trading Partner Agreements, developing node code and adjustments specific to IC data flows, completing XML file transfers, data entry via web-services, and full node deployment for IC data flows. EPA also encourages applicants to participate on Integrated Project Teams to foster exchange at the federal, state, tribal and local level as well as other entities early in 2006.

Institutional Controls Tracking System Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
	FY 2006	**FY 2007**		**FY 2008**	
Incorporate data standards into state/territorial/tribal and other information system	FY2005 ongoing	X	X	X	X
Complete mappings to Standard/XML Schema and test	FY2005 1st half	X	X	X	X
Pilot XML file transfer through CDX	FY2005 1st half	X	X	X	X

Resource Conservation and Recovery Act Information System

System Description:
RCRAInfo is a comprehensive EPA information system, providing access to data supporting the RCRA of 1976 and the Hazardous and Solid Waste Amendments of 1984. RCRAInfo contains both programmatic and enforcement information regarding the solid/hazardous waste program, including facility status, regulated activities, and compliance data.

Status and Plans:
EPA has been working collaboratively with the Environmental Council of States (ECOS) on a pilot RCRA data exchange effort. ECOS has been developing schemas and translators that could be used for completing XML exchanges. As of June 2005, the RCRA Handler Module has been in production for six months. The Corrective Action and Permitting Modules are undergoing testing. The Compliance Monitoring and Enforcement (CME) module has been revised as a result of changes required by EPA in the collection of this data. RCRAInfo is undergoing significant upgrades over the Summer of 2005, and changes to the CME module are part of this upgrade. The CME XML schema will be available for testing by August 2005 and released some time in November 2005 (both flat and XML). The Waste Activity Report (WAR) module has not been addressed at this time. As resources and priorities between States and EPA permit, the WAR module will be addressed as appropriate.

In FY 2006, EPA intends to make revisions to the Permitting and Corrective Action modules. It is anticipated that data element changes will take place and require states to make revisions to their system in order to accommodate submissions to EPA. Release of these XML schemas is to be determined at this time.

RCRAInfo Office of Solid Waste							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Planned Activities**					
		FY 2006		**FY 2007**		**FY 2008**	
Incorporate approved data standards into national information system	FY 2007 1st half		X	X			
Develop XML schema for Handler data flow	FY 2005 (1st half)	X					
Develop XML schema for Permitting and Corrective Action data flow (pilot/phase I)	FY 2005 (2nd half)						
Develop XML schema for CME data flow (XML Version 2.0 pilot/phase I)	FY 2006 (1st half)	X					
Develop XML schema for Permitting and Corrective Action data flow (production/phase II)	FY 2006 (2nd half)		X	X			
Test node-to-node (State-to-EPA) data exchanges	FY 2006	X	X				
Support operational node-to-node (State-to-EPA) data exchanges	FY 2006		X	X	X	X	X

Suggested Activities for Exchange Network Partners:
States, tribes and territories are encouraged to complete their mappings to the Handler, Permitting, Corrective Action, and CME XML schemas any time after EPA's implementation. If States are just starting work at the time of the 2006 grant awards, states and tribes are advised to plan on using the 2006 updated Corrective Action and Permitting schemas. EPA also encourages recipients to participate on Integrated Project Teams, monitor progress, and test the submission process with EPA. The testing process for submissions to EPA is a critical stage that requires an extensive amount of state involvement and commitment in partnership with EPA to work through issues that can only be recognized through 'real' data submissions.

Review of the Permitting and Corrective Action schemas in 2006 will determine the extent of the revision that would take place under a Phase II, also known as Version 4.0. The CME module will be released as a new version (3.0) in November 2005, and will include new data requirements and structural changes. More information can be provided after testing and implementation of Phase I.

RCRAInfo Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
	FY 2006	**FY 2007**		**FY 2008**	
Incorporate approved data standards into state/territorial/tribal information system			X	X	X
Complete mappings to Handler XML Schema and test	FY2005 (1st half)	X	X	X	X
Complete mappings to Permitting and Corrective Action XML Schemas and test (pilot/phase I)	FY2006 (1st half)	X	X	X	X
Complete mappings to CME XML Schema and test flow (Version 2.0 pilot/phase I)	FY2006 (1st half)	X	X	X	X
Complete mappings to Permitting and Corrective Action XML Schema and test (production/phase II)	FY2006 (2nd half)	X	X	X	X
Test node-to-node (State-to-EPA or State-to-State) data flow	FY2005 (1st half) and ongoing	X	X	X	X
Submit production RCRA data using the Exchange Network node	FY2005 (2nd half)	X	X	X	X

OFFICE OF WATER

Safe Drinking Water Information System/Federal Version

System Description:
SDWIS/FED is an EPA national database that stores routine information about the Nation's drinking water. SDWIS/FED stores the information EPA needs to monitor approximately 160,000 public water systems. As required by the Safe Drinking Water Act (SDWA), states oversee public water systems within their jurisdictions to ensure compliance with EPA and state drinking water standards. States periodically report drinking water information to EPA, and this information is stored in SDWIS/FED. The Office of Ground Water and Drinking Water (OGWDW) and the Office of Enforcement and Compliance Assistance use the data in SDWIS to oversee the nation's drinking water program and to track the progress of program in protecting public health. Currently, the data flows supporting the Public Water Systems Supervision (PWSS) Program include: 1) SDWIS-Fed, 2) the National Occurrence Data Base (NCOD), and 3) the Safe Drinking Water Accession and Review System. In the near future, OGWDW will be determining the need for two more data flows: sample data and airplane-truck-ship data.

Status and Plans:

- The legacy system is scheduled to be "turned off" on September 30, 2005.
- The XML schema for the drinking water data flow from states to EPA was completed in April 2004.
- Beginning in October 2004, CDX registered data providers were able to provide XML-formatted files to SDWIS. SDWIS now supports node-to-node data exchanges of drinking water data files with States.

Modernization Efforts Plan: OGWDW has met the following milestones for modernizing SDWIS:

- Maintain most or all historical support functions for both the SDWIS/FED database and SDWIS/STATE software (30 states are currently using SDWIS/STATE and six additional states are committed and scheduled to use it).
- Provide drinking water data providers (states and Regions) with access to CDX through a registration process.
- Conduct a pilot project using XML schema for a State-to-EPA data flow.
- Conduct a pilot project using FedRep validation software (desktop application). The software incorporates the State-to-Fed XML schema and is intended to move the validation of state data submissions closer to the data providers, thus minimizing reporting delays and errors.
- Launch the production of the ORACLE replacement database that will allow EPA to receive XML files of drinking water data from states through CDX.
- Enhance and expand the Drinking Water Data Warehouse. The Drinking Water Data Warehouse extracts data from SDWIS and organizes it into topic-specific Pivot Tables that are available over the Internet for on-line querying by the public. OGWDW is discussing the potential development of new formats for presenting the data.

In addition to these SDWIS-Fed modernization activities, OGWDW is involved with the following:

- Developing a Web-enabled version of the SDWIS/STATE software—the primary state implementation assistance tool;
- Collecting sample data; and,
- Establishing a flow to support tracking drinking water usage interstate conveyers, such as airplanes, trucks and ships.

SDWIS Modernization Data Flow Activities Office of Water							
Activity Goal, Objective, or Milestone	**Target Completion Date (FY & 6- month period**	**Estimated Duration Of Activities**					
		FY 2005		**FY 2006**		**FY 2007**	
Maintain most/all historical support functions for SDWIS-FED	FY 2005 (2nd half0 SDWIS- FED		X				
Maintain most/all historical support functions for SDWIS-STATE.	Ongoing: SDWIS-STATE						X
Provide CDX access to drinking water data providers through a registration process	FY 2005 (1st half)	X					
Launch production Oracle replacement database	FY 2005 (1st half)	X					
Enhance/expand the Drinking Water Data Warehouse	FY 2005/Ongoing (2nd half)		X				
Conduct workshops to build on and market successes of previous grants to all states (e.g., Drinking Water Lab Results Challenge Grant)	Ongoing						X
Web-enable SDWIS-STATE, the primary state implementation assistance tool (Phase 1 Beta)	FY 2005 (1st half)	X					
Web-enable SDWIS-STATE, the primary state implementation assistance tool (Phase 1 Production)	FY 2005 (2nd half)		X				

SDWIS Modernization Data Flow Activities Office of Water							
Activity Goal, Objective, or Milestone	**Target Completion Date (FY & 6- month period**	**Estimated Duration Of Activities**					
		FY 2005		**FY 2006**		**FY 2007**	
Web-enable SDWIS-STATE, the primary state implementation assistance tool (Phase 2 Beta)	FY 2006 (1st half)			X			
Web-enable SDWIS-STATE, the primary state implementation assistance tool (Phase 2 Production)	FY 2007 (1st half)					X	
Node-to-node exchange for existing data flows: PWSS Program SDWIS-Fed summary data	FY 2006 (1st half)			X			
Node-to-node exchange for existing data flows: PWSS Program occurrence data					X		
Test node-to-node exchange for PWSS Program UCMR-2 data						X	
Test node-to-node exchange for PWSS Program ICC data							X

Suggested Activities for Exchange Network Partners:

SDWIS Modernization Data Flow Activities Suggested Activities for Exchange Network Partners					
Activity Goal, Objective, or Milestone	**Target Completion Date (FY & 6 month period)**	**Estimated Duration Of Activities**			
		FY 2007		**FY 2008**	
Flow node-to-node exchange for PWSS Program summary data	FY 2006 (First Half)	X	X	X	X
Test node-to-node exchange for PWSS Program occurrence data	FY 2006 (Second Half)	X			
Flow node-to-node exchange for PWSS Program occurrence data	FY 2007 (1st half)	X	X	X	X
Conduct workshops to build on and market successes of previous grants	Ongoing	X	X	X	X

Source Water Protection

System Description:
The SWP data exchange initiative is a collaborative effort between Office of Water (OW) and state programs implementing the SWP program under the SDWA. States were required under the SDWA 1996 amendments to develop a source water assessment program (SWAP), no later than May, 2003, that includes four elements: 1) delineation of the source water areas (SWA) around each well or intake; 2) an inventory of potential contamination sites within each SWA; 3) a susceptibility analysis of each SWA; and 4) a plan to make this information available to the public.

In FY 2003, OW requested access to selected portions of each State's SWAP to use in targeting vulnerable source waters for its developing source water protection program. OW is developing national geographic information systems (GIS) coverage of the delineated SWA polygons it receives from the states and a ORACLE-based relational data module to hold the SWA attribute data and related information needed to calculate progress against the measures included in the drinking water strategic plan. Once system development is complete, the GIS coverage of the SWA polygons and the related tabular data in the SWP data module will be housed in the Reach Address Database (RAD) in OW's WATERS data platform.

The planned data flow to the SWP data module is from the states' existing databases into an XML schema through EPA's CDX into EPA's SWP data module. This is an ancillary initiative attached to the larger SDWIS data modernization initiative, and it will be integrated with that initiative. All SWA polygons received from the states are linked by ID to the wells and intakes from the public water system inventory data, which are also reported by the states into SDWIS.

Status and Plans:
Activities to Date: In FY 2003 and FY 2004, OW developed and populated the new SWA polygon GIS coverage with state data voluntarily submitted, installed a proposed SWP data module for the SWP tabular data, and created an XML schema for potential use in transferring the data from the states to EPA. The statuses of other SWP activities are outlined below:

- The test *SWA polygon GIS data layer* was developed and deployed in the WATERS RAD in early FY 2004. Currently, the data layer contains SWA polygon data from 24 states. Access is currently restricted to system development staff until approval is granted to make the data available to EPA programs.
- The test ORACLE-based *SWP data module* was developed and deployed on a development server in mid-FY 2004. Currently, the SWP module is populated with five states' data. Access is currently restricted to system development staff until approval is granted to make the data available to EPA programs.
- A pilot data transfer initiative was conducted in FY 2004 with the Ground Water Protection Council (GWPC), a state association, to test the proposed data flow from the states through an XML schema to the SWP data module. An XML schema was developed and populated with four states' data and the XML file was input into the SWP data module.

Planned Activities in FY 2005: OW plans to update the SWA polygon GIS data layer with state-submitted coverages based on voluntary state submissions of the complete set of GIS data. OW also plans to update the SWA data module and XML schema based on the latest SWP Measures Guidance under the FY 2005 Strategic Plan.

Planned Activities Starting in FY 2005 through FY 2006: OW also plans to develop and test the proposed data flow from the states into the existing XML schema through CDX into the SWP data module.

Source Water Protection (SWP) Data Exchange EPA Office of Ground Water and Drinking Water (OGWDW)							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**FY 2005**		**FY 2006**		**FY 2007**	
Complete Round 2 of SWA Polygon Data collection from the states and into OW's GIS data layer in WATERS	FY 2005 (2nd half)	X	X				
Revise the SWP data module based on updated reporting guidance for FY 2005	FY 2005 (1st half)	X					
Revise the XML schema for the SWP data module based on updated reporting guidance for FY 2005	FY 2005 (1st half)	X					
Initiate second round data transfer pilot initiative with voluntary states through GWPC	FY 2005 (2nd half)		X				
Test node-to-node data exchanges	FY 2006 (2nd half)		X	X	X	X	X
Support operational node-to-node data exchanges	Ongoing (as states choose to participate)			X	X	X	X

Suggested Activities for Exchange Network Partners: Source Water Protection (SWP) Data Exchange					
Suggested Activities for Exchange Network Partners	**Suggested Activities for Two-Year Project Period (for FY2006-funded grants)**	**FY 2006**		**FY 2007**	
Design, develop, and test Exchange Network node	Ongoing	X	X	X	X
Help develop XML schema for SWP data exchange data flow, by participating in the Integrated Project Team (IPT)	FY 2006 (1st half)	X			
Map information system data to the XML schema	FY 2006 (2nd half)	X	X		
Test node-to-node SWP data exchange data flow	FY 2007 (1st half)		X	X	X
Submit production SWP data exchange data using the Exchange Network node	FY 2007 (2nd half)		X	X	X

Water Quality Exchange

System Description:

Presently, the STORET system is EPA's main repository of ambient water quality and biological monitoring data. It contains data obtained from a variety of organizations across the United States ranging from small volunteer watershed groups to state and federal environmental agencies. Access and use of water quality monitoring data of documented quality are essential for successful implementation of CWA programs. The STORET Central Warehouse provides Public access to data on the quality and biological integrity of the Nation's waters. Public access supports all of the Agency's public access directives, as well as all Presidential Directives concerning the Public's "Right-to-Know". Currently, data are entered into a locally operated copy of STORET through the use of a series of desktop validation software applications provided by EPA. These data are centralized at EPA and made available to the public. EPA is currently developing alternatives for sharing water quality data with partners that are consistent with the Exchange Network.

Status and Plans:

- XML Schema: OW is developing full XML tags and schema to support water quality monitoring data exchanges in 2005. The OW, WQX pilot currently supports field observations, water chemistry and fish tissue information.
- Pilot Data Exchanges: EPA is conducting pilot data exchanges as part of the WQX with partners in 2005. Pilot participants are currently mapping data to the WQX XML Schema and generating exchange data flows to EPA. Testing and validation of data flow submissions will take place in October through December 2005. OW will be evaluating the pilot and exchange schema in January and February 2006. By fall of 2006, OW plans to complete the implementation of XML Water Quality Monitoring data flows into EPA through CDX. This data will ultimately reside in the STORET Central Warehouse.
- Web Services: EPA will provide Web services to support queries of water quality data for federal/state/territorial/tribal partners from OW's Water Quality Monitoring data repository. These Web Services will use the WQX schema whenever possible and appropriate.
- EPA plans to work with various exchange partners on the development of an exchange schema to fully support biological monitoring data in summer 2006.

Water Quality Monitoring Data Exchange (STORET) Office of Water							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**					
		FY 2006		**FY 2007**		**FY 2008**	
Incorporate approved data standards into national information system	Ongoing	X	X	X	X	X	X
Pilot WQX data exchange	FY 2006 (1st half)	X					
Evaluate WQX Pilot Project	FY 2006 (2nd half)		X				
Support operational node-to-node data exchanges	FY 2007 (1st half)			X	X	X	X
Develop XML schema for exchange of biological monitoring data	FY 2007 (1st half)			X			
Develop Data Transformation Tools for biological monitoring data flow	FY 2007 (2nd half)				X		
Pilot biological monitoring data exchange, node-to-node, and node-EPA	FY 2008 (1st half)					X	

Suggested Activities for Exchange Network Partners:

Exchange Network partners wishing to participate in Water Quality Monitoring data exchanges through the Exchange Network should adopt all applicable approved data standards, as well as associated method standards from EPA's System of Registries. (See Appendix C for a list of all approved data standards.) Partners should also consider the following list of activities

- Develop applications that use EPA WQX Web services for federal/state/territorial/tribal partner analyses.
- Build tools that integrate water quality data from various sources to present a common view of water quality data.
- Participate in development of exchange schema for biological monitoring data.
- Develop shareable translation and validation tools to facilitate water quality and biological data exchange.
- Begin linking station locations consistent with the NHD and the Geospatial One Stop Hydrography Standard.
- Coordinate activities with National Water Program Guidance for 2005-2008.

Water Quality Monitoring Data Exchange (STORET) Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2007		**FY 2008**	
Develop applications that use EPA WQX Web services for federal/state/territorial/tribal partner analyses.	FY 2007 (1st half)	X			
Build tools that integrate water quality data from various sources to present a common view of water quality data	FY 2007 (2nd half)		X		
Participate in development of exchange schema for biological monitoring data	FY 2007 (1st half)	X			
Develop shareable translation and validation tools to facilitate data exchange	FY 2007 (2nd half)		X		
Test node-to-node biological monitoring data flow	FY 2008 (1st half)			X	

eBeaches Data Exchange

System Description:
eBeaches is the Agency's on-line system for states to electronically transmit beach water quality and swimming advisory data to EPA. EPA constructed eBeaches to meet a Beaches Environmental Assessment and Coastal Health (BEACH) Act requirement to collect, store, maintain, and display coastal and Great Lakes states beach advisory and closing data and beach water quality data. States are required to submit these data to EPA as a BEACH Act Grant condition. The grant conditions require an annual submission, but states can submit data more frequently.

eBeaches consists of both new and existing databases and applications. Beach notification data flows to EPA via XML file through CDX to the PRAWN database. Beach advisory and closing data are stored in PRAWN and displayed on the BEACON web application.

Beach monitoring or water quality data are stored in STORET. States can submit the data as a flat file if they are an existing STORET user, or as an XML file through WebSIM via CDX if they are a non-STORET user. State's submitting files through CDX must use WebRegistration to collect water quality metadata and WebSIM to transfer data from CDX to STORET.

EPA has developed the capability to receive beach notification data via the Exchange Network by constructing a Beach Node. The system is operational and has received successful data transmissions. EPA is planning an Exchange Network option for monitoring data. (See the Water Quality Monitoring Data/STORET section for more information.)

Status and Plans:

- XML Schema: Both XML schemas for beach monitoring and notification data are completed. EPA plans to update the beach notification XML schema to account for new data fields and edits by Fall 2005. At that time, EPA will release supporting documentation on explaining changes and defining XML tags.
- Flow Configuration Document: ECOS/EPA will construct a FCD for state beach notification data flow on state Nodes by Summer 2006.
- XML Services: EPA will continue to provide XML support services to states on both beach monitoring and notification data schemas.
- Node Services: EPA will provide Exchange Network support services for states to send beach notification data via state nodes. For monitoring data, please see the Water Quality Monitoring data/STORET section.

eBeaches Data Exchange
Office of Water

Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Planned Activities**					
		FY 2005		**FY 2006**		**FY 2007**	
Update XML schema for notification data and user guide	FY 2005-6		X	X			
Develop FCD for beach notification data flow	FY 2005-6		X	X			
Assist states with notification data flow through Beach Node	FY 2006-7			X	X	X	X
Continue to support state beach monitoring and notification XML data submission	FY 2005-7	X	X	X	X	X	X

Suggested Activities for Exchange Network Partners:

States wishing to participate in Beach monitoring and notification data exchanges through the Exchange Network should adopt all applicable approved data standards, as well as associated method standards from EPA's System of Registries. (See Appendix C for a list of all approved data standards.) Other suggested activities include:

- Map beach data to the registered schema for each data flow.
- Test and flow data through the Exchange Network for beach notification data.

eBeaches Data Exchange Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2006		**FY 2007**	
Map beach data to the registered schema for each data flow	Ongoing	X	X	X	X
Test and flow data exchange through the Exchange Network for beach notification data.	Ongoing	X	X	X	X

Water Quality Standards

System Description:
Currently, initial state WQS data sets are extracted from adopted and approved state and EPA regulations, and quality assured. Data sets of new and updated WQS, approved by the states, are uploaded to the internet every six months as a new release of the Water Quality Standards Database (WQSDB). A secure extranet edit tool is being developed to facilitate the update and quality assurance process.

This dataset is requested by EPA to be georeferenced to the NHD. The flow modernization plan presented below will add WQSDB to the Integrated Reporting (IR) and NHD distributed architecture and data flows to provide an additional exchange pathway aligned with other water programs.

Status and Plans:
Begin to develop an XML Schema for WQS data in Fall of 2005, utilizing IR data and the NHD georeferencing schema being developed as part of an existing Exchange Network grant with Minnesota. Draft IR and NDH schema to be available fall 2005.

Integrated Reporting and Water Quality Standards Office of Water							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**					
		FY 2006		**FY 2007**		**FY 2008**	
Incorporate approved data standards into national information systems	Ongoing	X	X	X	X	X	X
Expand state-EPA workgroup to optimize integration across programs	FY 2006 (2nd half)	X	X				
Develop XML schema for WQS data flows, including documentation, user guide, and system requirements	FY 2006 (1st half)	X					
Work with states to map data	FY 2007 (2nd half)			X	X		
Test node-to-node data exchanges for WQS data using auto-validation tool	FY 2007 (2nd half)				X	X	
Support operational node-to-node WQS data exchanges	FY 2008 (1st half)					X	X

Suggested Activities for Exchange Network Partners:

- Participate in project team to develop XML Schema for WQS data exchange
- Build tools for translating information to the schema
- Develop shared tools for determining assessment decisions from WQS data

Integrated Reporting and Water Quality Standards Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2007		**FY 2008**	
Incorporate approved data standards into state/territorial/tribal information system	FY 2006 (2nd half)	X	X	X	X
Help develop XML schema for WQS data flow, by participating in the Integrated Project Team (IPT)	FY 2007 (1st half)	X			
Map information system data to the XML schema	FY 2007 (2nd half)		X		
Test node-to-node WQS data flows	FY 2008 (1st half)			X	
Submit production WQS data using the Exchange Network node	FY 2008 (2nd half)				X

Integrated Reporting/Assessment Database

System Description:
EPA currently maintains the Assessment Database (ADB) to manage electronic Integrated Reporting (IR) information for sections 305(b) and 303(d) of the CWA. The ADB currently operates under a distributed architecture as client software that must be operated by the reporting entities. The database manages information relating to assessment and impairment decisions for waterbodies within a jurisdiction. Once data are received and approved by EPA, they are merged into the National Assessment Database and made available on the web for regional and national reporting on the status of water quality.

These datasets are requested by EPA to be georeferenced to the NHD and based upon WQS information described in separate flow descriptions.

Status and Plans:
- Developing XML Schema for IR data and NHD georeferencing as part of existing EN grant. Draft schema to be available fall 2005.
- Plan to test node-to-node exchange of IR data with recipient in spring 2006.
- Plan to support node-to-node exchange if IR data well in advance of April 2008 reporting deadline.

Integrated Reporting/Assessment Database Office of Water							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**					
		FY 2006		**FY 2007**		**FY 2008**	
Incorporate approved data standards into national information systems	Ongoing	X	X	X	X	X	X
Develop XML schema for IR data flow	FY 2006 (1st half)	X					
Test node-to-node data exchanges for IR data	FY 2006 (2nd half)		X				
Support operational node-to-node IR data exchanges	FY 2007 (1st half)			X	X	X	X
Expand state-EPA workgroup to optimize integration across programs	FY 2006 (2nd half)	X	X				

Suggested Activities for Exchange Network Partners:

- Participate in project team to adopt/enhance XML schema for IR data exchange.
- Build tools for translating information to the schema.
- Incorporate existing IR and NHD georeferencing XML schema into web-based services and applications.
- Develop shared tools for determining assessment decisions from WQS information.

Integrated Reporting/Assessment Database Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2007		**FY 2008**	
Incorporate approved data standards into state/territorial/tribal information system	FY 2006 (2nd half)	X	X	X	X
Develop enhancements to XML schema for IR data flows, by participating in the Integrated Project Team (IPT)	FY 2007 (1st half)	X			
Map information system data to the XML schema	FY 2007 (2nd half)		X		
Test node-to-node IR and NHD data flows	FY 2008 (1st half)			X	
Submit production IR and NHD data using the Exchange Network node	FY 2008 (2nd half)				X

National Hydrography Dataset / Reach Address Database

System Description:

NHD is a geographic database that interconnects and uniquely identifies the stream segments or "reaches" that comprise the nation's surface water drainage system. The US Geological Survey (USGS), EPA and cooperating states are collaborating to produce and maintain the NHD.

The NHD provides a national framework for assigning “reach addresses” to water-related entities, such as industrial dischargers, drinking water supplies, fish habitat areas, wild and scenic rivers. Reach addresses establish the locations of these entities relative to one another within the NHD surface water drainage network in a manner similar to street addresses. Once linked to the NHD by their reach addresses, the upstream/downstream relationships of these water-related entities and any associated information about them can be analyzed using software tools ranging from spreadsheets to GIS. GIS can also be used to combine NHD-based network analysis with other data layers, such as soils, land use and population, to help better understand and display their respective affects upon one another in support of the CWA and the SDWA. Furthermore, since the NHD provides a nationally consistent framework for addressing and analyzing water-related information linked to “reach addresses “by one organization (national, state, local), the data can be shared with other organizations and easily integrated into many different types of applications.

The NHD provides comprehensive coverage of hydrologic data for the US. Initially NHD was based on 1:100,000-scale data, however, the NHD is currently being developed at higher-resolutions required by many users. The USGS and EPA will continue to collaborate on maintaining and enhancing the NHD over time – the USGS, retaining primary responsibility for database operations, access, and enhancement, while the EPA provides hydrologic applications expertise and partnerships with the environmental user community. This dual-role approach is intended to capitalize on the respective strengths of each agency and build upon their existing relationships with other cooperating organizations. EPA uses a copy of the NHD stored in its Reach Address Database (NHD-RAD) for its central applications. The NHD-RAD, which also contains reach addresses for water-related entities as described above, serves as the integrating spatial framework for a growing number of water systems, which in aggregate are known as the Watershed Assessment, Tracking, and Environmental Results System (WATERS).

We request proposals to enable the flow of geospatial information for water program activities or events that can be referenced to the NHD as well as proposals to provide spatial and attribute updates to the NHD using the Federal Geographic Data Committee's Hydrographic Content Standard. The use of the NHD/ RAD flow for the exchange of reach addresses should be combined with a programmatic data flow such as the Integrated Report.

Status and Plans:

- Complete the XML Schema for NHD geo-referencing data in early 2006 utilizing the schema being developed as part of existing Exchange Network grant consistent with the FGDC Hydrographic Content Standard.

NHD / Reach Address Database Office of Water							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**					
		FY 2006		**FY 2007**		**FY 2008**	
Incorporate approved data standards into national information systems	Ongoing	X	X	X	X	X	X
Publish Web Services to deliver geospatial data from the Reach Address Database	FY 2006 (2nd half)	X					
Finalize XML schema for NHD geo-referencing consistent with FGDC Hydrographic Content Standard	FY 2006 (1st half)	X					
Work with states to map data to schema	FY 2006 (2nd half)		X	X	X		
Test node-to-node data exchanges for NHD geo-referencing data using auto-validation tool	FY 2007 (1st half)			X	X	X	
Support operational node-to-node NHD geo-referencing data exchanges	FY 2007 (1st half)			X	X	X	X

Suggested Activities for Exchange Network Partners:

- Incorporate NHD geo-referencing schema into new or existing water related information flows including but not limited to: Integrated Reporting, Water Quality Standards, Water Quality Monitoring, Fish Consumption Advisories, Beaches, NPDES Discharge Locations, and Surface Water Intakes.
- Build tools for reach addressing data to the NHD and translating information to the schema.
- Develop shared tools and web-services for exchanging NHD data content updates.

NHD / Reach Address Database Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2007		**FY 2008**	
Incorporate approved data standards into state/territorial/tribal information system	FY 2006 (2nd half)	X	X	X	X
Map information data to the NHD geo-referencing XML schema	FY 2007 (1st half)	X	X	X	X
Test node-to-node the NHD geo-referencing data flows	FY 2007 (2nd half)	X	X	X	X
Submit production the NHD geo-referencing data using the Exchange Network node	FY 2008		X	X	X

Underground Injection Control

System Description:

There is currently no national UIC facility-level database. The proposed UIC Relational Data Base Management System (RDBMS) will include:

- An EPA repository of program information from the states and EPA Direct Implementation (DI) programs (i.e., programs administered by EPA);
- A data transfer mechanism (using an XML schema through CDX) from the states and DI programs to extract the data periodically to EPA;
- A data transfer mechanism from the UIC repository to other EPA databases ; and,
- A data warehouse to meet the EPA user data needs (including other EPA programs).

The data repository will store well-specific facility level data needed to address the business drivers, including UIC inventory (including a key ID, permit information, geospatial information, inspection data, violation information, and enforcement actions). It represents a very small, core set of UIC data elements needed to meet EPA's state primacy oversight and federal responsibilities, to effectively integrate the UIC program onto the SWP and other federal programs, and to efficiently respond to the myriad of information requests from the program stakeholders. All the data to be transferred to the new EPA data repository are already collected in some form by the states and DI programs from the UIC regulated community under the UIC regulations.

The UIC RDBMS will support a single UIC data flow from the state and regional DI programs to support all national environmental programs requiring UIC data. Data is currently collected from the states and DI programs at state summary level only. Business drivers also exist at an Agency level, above and beyond those called out below, that aligns with Agency efforts to centralize data collections, reduce data redundancy, and support future initiatives, such as CDX.

Status and Plans:
Planned Pre-Requirements Analysis Activities in FY 2005: OW completed a business case report in FY 2004 and other pre-requirements analysis activities to support a decision to develop a new UIC database.

Several other pre-requirements analysis activities are currently underway:

- Reviewing and revising the initial set of minimum data elements proposed for the new database, developing a conceptual relational data model and data element dictionary;
- Soliciting information on existing databases at the state and EPA direct implementation programs to determine whether the minimum data needs already exist in current databases;
- Evaluating data integration options with other Agency databases that have or need access to UIC data; and
- Working with states and GWPC to assess the burden of the needed UIC data flow from state databases to EPA through the EPA exchange network and CDX.

Underground Injection Control (UIC) Data Flow Activities EPA Office of Ground Water and Drinking Water (OGWDW)							
Estimated Duration of Activities	**Goal, Objective, or Milestone Target Completion Date (FY & 6-month period)**	**FY 2005**		**FY 2006**		**FY 2007**	
Complete relational database structure and dictionary, including approved Agency data standards	FY 2005 (1st half)	X					
Develop pilot data transfer schema (using XML) to conform to database structure and solicit state volunteers to map their database into the XML schema	FY 2005 (2nd half)		X				
Develop proposed XML schema for the UIC, based on pilot results	FY 2006 (1st half)			X			
Work with states to map their UIC data to the XML schema	FY 2006 (1st half)			X			
Test node-to-node data exchanges	FY 2006 (2nd half)			X	X		
Support operational node-to-node data exchanges	FY 2007 (1st half)				X	X	X

Suggested Activities for Exchange Network Partners:

Underground Injection Control (UIC) Data Flow Activities Suggested Activities for Exchange Network Partners					
Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)	**Goal, Objective, or Milestone Target Completion Date (FY & 6-month period)**	**FY 2006**		**FY 2007**	
Develop XML schema for UIC electronic data flow from the UIC well owner/operator (the regulated community) to the state primacy agency, to meet well reporting requirements	Ongoing	X	X	X	X
Help develop XML schema for UIC data flow from state to EPA, by participating in the IPT	FY 2006 (1st half)	X			
Map state's information system data to the XML schema	FY 2006 (2nd half)		X		
Test node-to-node UIC data flow	FY 2007 (1st half)		X	X	X
Submit production UIC data using the Exchange Network node	FY 2007 (2nd half)		X	X	X

OTHER PROGRAMS

Facility Registry System

System Description:
FRS is a national database of facility identification information. It covers all facilities (over 1.4 million unique places, stations, and sites) that are subject to environmental regulations or are of environmental interest. Key identifying information stored in FRS includes facility names, alternate facility names, geographic locations (i.e., street address, as well as, latitude/longitude), mailing addresses, points of contact, permit and system identification numbers, industrial codes, and parent organizational structures. All these data elements are standards-based and can be found on the Environmental Data Registry Home page at: www.epa.gov/edr. FRS receives data from EPA's national environmental information systems and from many state master records, which conform to the FITS2 model (Facility Identification Templates for States 2). The FRS database directly supports EPA's Envirofacts Data Warehouse Web site, the EPA enforcement ECHO Web site, and ICIS. It is also used by many EPA applications, such as Window to My Environment and EnviroMapper.

Status and Plans:
The current status and plans for the FRS system/data flow are the following:

- The information system is in production with CDX,
- The preferred XML schema is in production and is Fac ID 2.3 version
- Currently in node-to-node data exchanges using the Exchange Network.

Facility Registry System Office of Environmental Information						
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**				
		FY 2005		**FY 2006**		**FY 2007**	
Incorporate approved data standards into national information system	Completed						
Develop XML schema for FRS data flow	Completed						
Test node-to-node data exchanges	Completed						
Support operational node-to-node data exchanges	Completed						

Suggested Activities for Exchange Network Partners:
EPA would like to emphasize in this year's guidance for states to direct more attention to locational data in the exchanges of facility information to EPA or from EPA on the latitude/longitudes of the facilities, which is included in the Facility ID 2.3 version. This emphasis on quality documented locational values for regulated facilities directly supports the Agency's desire and need to have accurate data for regulated facilities to

respond to homeland security threats and develop prevention plans. Other suggested activities include exchanging state and tribal facility identification records with FRS via CDX. Additional suggestions include developing the capability to use the Exchange Network to obtain, use, and integrate facility data from FRS with other state, tribal and/or local data. More information and documentation about EPA's FRS can be found at: http://www,epa.gov/frs

Facility Registry System Suggested Activities for Exchange Network Partners							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**					
		FY 2006		**FY 2007**		**FY 2008**	
Incorporate approved data standards into state/territorial/tribal information system	Currently Available						
Design, develop, and test Exchange Network node	Currently Available	X	X	X	X	X	X
Help develop XML schema for FRS data flow, by participating in the IPT	Completed						
Map information system data to the XML schema	Completed	X	X	X	X	X	X
Test node-to-node FRS data flow	Currently Available	X	X	X	X	X	X
Submit production Facility Id data using the Exchange Network node	Currently Available	X	X	X	X	X	X
Emphasis on improving locational coordinates for facility/site/station data	FY 2005	X	X	X	X	X	X
Use FRS to jump start State database populations for States just beginning data integration (Out Node Service to States)	FY 2005	X	X	X	X	X	X

National Pollution Prevention Results System

System Description:
The P2 Results System is a system designed to create an efficient and effective way to present and analyze the results of pollution prevention programs for the states, EPA Regions and the entire country. The overall goal is to collect and display the results of the P2 approach on environmental protection, and to support continuous improvement in P2 program management and delivery of P2 services.

The system includes a framework for data collection, starting with businesses and other organizations providing data to state and local P2 programs, who would collect the data, typically on desktop data tracking systems. Data would then be aggregated on a regional basis, typically using software tools that can apply other factors for analysis. There would be a national roll-up of the results data, including a report that would include both quantitative data tracking national progress and other qualitative information. Priority is given to environmental outcome data, including data that addresses progress toward P2 targets in EPA's Strategic Plan.

Status and Plans:
The National P2 Results System, including the data dictionary, was made available for public comment in January 2005. It was formally presented at the National Environmental Partnership Summit in Chicago in April 2005. As of June 2005, 25 states had signed Memoranda of Agreement (MOA) to participate. The system was developed by the P2 Results Task Force, which is made up of state representatives from the National Pollution Prevention Roundtable (NPPR) and the Pollution Prevention Resource Exchange (P2RX) Centers, as well as EPA HQ and Regional representatives. NPPR is the designated co-regulator for EPA's national pollution prevention program. The P2RX centers are university-based locations for disseminating P2 information. The development of the National P2 System is supported by an EPA Cooperative Agreement to NPPR.

National P2 Results System Office of Prevention, Pesticides, and Toxic Substances							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**					
		FY 2005		**FY 2006**		**FY 2007**	
Complete data dictionary and guidance	FY 2005 (1st half)	X					
Review of draft system by P2 community	FY 2005 (1st half)	X					
Adopt National P2 Results System	FY 2005	X					
Disseminate System information	Ongoing	X	X	X	X	X	X
Develop training and other support	FY 2005	X	X	X	X	X	X
Report national data using System	Ongoing		X	X	X	X	X
Develop XML schema	FY 2006			X	X	X	X
Support node-to-node exchanges	FY 2007						X

Suggested Activities for Exchange Network Partners:
Key national partners are the NPPR and the P2RX Centers, whose collaborative efforts led to the development of the system. Sub-national partners include state, local, and tribal government agencies and universities, which manage P2 programs and will gather P2 data using the System. This chart focuses on activities during the project period for FY 2006-funded grants.

National P2 Results System Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2006		**FY 2007**	
Revise/add survey instruments, etc., as necessary	Ongoing	X	X	X	X
Revise/add desktop data tracking systems	Ongoing	X	X	X	X
Revise/add regional data aggregation tools	Ongoing	X	X	X	X
Provide/participate in training and other support	Ongoing	X	X	X	X
Report data using National System	Ongoing	X	X	X	X
Develop regional and national reports	Ongoing	X	X	X	X
Help develop XML schema	FY 2006	X	X	X	X
Design and test Exchange Network node	FY 2007			X	X

Toxics Release Inventory System

System Description:
The TRI program was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990. TRIS is a publicly available database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry sectors, as well as Federal facilities. Currently, EPA and states collect identical information from the same reporting population for their own records. TRIS is populated by TRI-Made Easy (TRI-ME) via CDX and EPA's Data Processing Center.

Status and Plans:
The TRI program is in the preliminary design phase of re-engineering its data flow processes (e.g., data collection through dissemination). The re-design of the TRI information flow would depict a total electronic submission of TRI data. This effort includes the development of a web-based version of the award winning TRI-ME data collection software. Another important element to this re-engineering effort is the development of the TRI State Data Exchange process that establishes an outbound flow of TRI data to states via CDX to state nodes. There will be many benefits to states that use the Exchange Network. States that use the Exchange Network will no longer have to maintain separate processing systems to capture and disseminate TRI data. Another critical goal is that facilities would report directly to EPA and the data would flow to the

states as soon as it is available. The data quality of TRI data would also significantly improve because the transfer of data would be electronic. The state-EPA TRI data reconciliation process would no longer be necessary.

The TRI Program is participating in the Exchange Network, including the use of XML schema for the Form R and Form A Certification Statements, which will allow states to test and implement this process as part of the FY2006 grant activities. The following TRI Program milestones are scheduled for the FY2006 process

Toxics Release Inventory							
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Estimated Duration of Activities**					
		FY 2006		**FY 2007**		**FY 2008**	
Define/Modify State/EPA Data Requirements	Ongoing	X	X	X	X	X	X
Develop/Modify XML Schema	FY 2006 (1st half)	X					
Develop/Modify Web Services for data transfer and retrieval	FY 2006 (1st half)	X					
Identify additional data requirements from the FY2006 process	FY 2007 (1st half)			X			
Test and Support operational node-to-node data exchanges	Ongoing	X	X	X	X	X	X

Suggested Activities for Exchange Network Partners:

Toxics Release Inventory Suggested Activities for Exchange Network Partners					
Goal, Objective, or Milestone	**Target Completion Date (FY & 6-month period)**	**Suggested Activities for Two-Year Project Period (for FY 2006-funded grants)**			
		FY 2007		**FY 2008**	
Work with the TRI Program to test XML data flows from EPA to State Nodes	FY 2007	X	X		
Work with the TRI Program to modify existing tools and develop new tools/applications that states can use for TRI data that can be made available through Web Services using the TRI State Data Exchange	Ongoing	X	X	X	X
States should develop procedures that enable the import/export of TRI data into their systems. The procedures should support data received via their state node and eliminates the reliance on the UTIL software	Ongoing	X	X	X	X
Work with EPA to develop process/tools that allow facilities to report to EPA only; facility data would be available to both EPA and states simultaneously	Ongoing	X	X	X	X
Use the TRI XML schema and develop loading/converter tools to populate the state database directly from incoming data sources such as CDX	Ongoing	X	X	X	X

Appendix C

Activities Related to the Mentoring, Planning and Training Group

The Mentoring, Planning and Training Group activities support the further development of the Exchange Network through collaborative efforts. Applicants are encouraged to combine the suggested activities from the Mentoring, Planning and Training Group with those of the Infrastructure Group and the Data Exchange, Analysis and Integration Group to facilitate, as appropriate, the development of integrated proposals. Examples of the types of activities in the Mentoring, Planning and Training Group are discussed below. Applicants may also suggest other related activities that support the expansion of the Exchange Network through collaborative efforts. Also, attached is a list of final data standards and standards that are currently under development by the Environmental Data Standard Council Action Teams.

Mentoring Activities

The mentoring subgroup focuses on providing assistance to potential Exchange Network partners, new Exchange Network partners, and/or partners that need a specific expertise that the applicant can provide. An applicant that includes mentoring activities in a proposal should describe the type and level of expertise that can be provided and the targeted recipients of such mentoring. For example, applicants can:

- Sponsor meetings with new partners or existing partners that support greater and enhanced use of the Exchange Network.

- Assist other state, tribal or territorial agencies that have not participated in the Exchange Network. This may include providing specific one-on-one assistance to potential new partners and sharing of documentation and experience.

- Facilitate the connection of major metropolitan statistical areas to Exchange Network information through partnerships. These activities should focus on areas where significant environmental, health, and natural resources exist, and that the Exchange Network would benefit from their participation in the Network.

Planning Activities

The planning subgroup focuses on meetings and activities that help to formulate plans that would foster cooperation among the Exchange Network partners and result in improved collaboration, cooperation, and integration across the environmental programs within and between the states, tribes, or territories. For example, applicants can

- Convene a community of interest for a NDAS and formulate a plan for collaborative work on the NDAS. (See Appendix A for definition.) The community of interest can,

for example, define the data area (scope), linkages to other data areas, an inventory of current Network projects related to the NDAS, and a list of major information gaps. The applicant, through the community of interest, would develop a plan that contains the description of the NDAS, a list of opportunities for collaboration, Network services that support the NDAS, and a list of relevant partners on the NDAS.

- Plan and participate in the development of a data standard for use by Exchange Network partners. The applicant would be responsible for establishing a data standard action team and supporting the data standard through finalization. For more information on final data standards and standards that are under development, please see the end of this Appendix.

- Plan and participate in a multi-partner collaboration to develop solutions that can be shared with Exchange Network partners for CROMERRR compliance. The applicants would be responsible for establishing a multi-partner team to collaborate on CROMERRR compliance for electronic reporting.

Training Activities

The training subgroup focuses on activities related to the development and provisions of training on the Exchange Network. Applicants are encouraged to work with associations that represent the interests of EPA's co-regulators and co-implementors to identify training needs specific to the Exchange Network. Applicants are also encouraged to discuss in their proposals whether they intend to develop a group similar to an Integrated Project Team (IPT) for training development, how the training will be made available to Network Partners, and how the training can be used across the Network (i.e., the applicability of the training to all relevant partners). Suggested topics for consideration include, but are not limited to:

- An Exchange Network beginner training course that would provide an introduction for new participants on the Network. This training would address the fundamentals of the Exchange Network, including how to establish a node, use of XML to exchange data, use of data standards, and developing trading partner agreements.

- Maximizing the use of the Exchange Network after a Network node is established. This training could be used to provide information on the available data standards, XML schema, data flow development, and the status of nodes on the Network.

- Methods and approaches for modernizing data collection, analysis and availability for the Exchange Network partners, aligning and integrating Exchange Network efforts within a state, tribe, or territory; and identifying and defining business needs that can be served by the Exchange Network within the state, tribe or territory.

Final Data Standards:

- Date - Version 1 (1999)
- SIC/NAICS - Version 2 (2005)
- Biological Taxonomy - Version 2 (2005)
- Chemical Identification - Version 2 (2000)
- Facility Identification - Version 2 (2005)
- Latitude/Longitude - Version 1 (2001)
- Permitting Information - Version 2 (2005)
- Enforcement/Compliance - Version 1 (2002)
- Tribal Identification - Version 2 (2005)
- Contact Identification - Version 2 (2005)

Standards Under Development:

- Environmental Sampling, Analysis and Results (ESAR)
    - Primary Data Standards under ESAR:
        - Project
        - Monitoring Location
        - Field Activity
        - Analysis and Results
    - Supporting Data Standards under ESAR:
        - Attached Binary Object
        - Representation of Date and Time
        - Sample Handling
        - Well Identification
        - Compositing
        - Bibliographic Reference
        - Equipment
        - Measure
        - Method
        - Quality Assurance and Quality Control

- Institutional Controls

Appendix D

Quality Assurance Guidelines

This appendix is designed to help states, territories, and tribes plan and implement high-quality Exchange Network projects. The success of Exchange Network projects depends on the achievement of definitive outputs and outcomes and on the quality of the products, services, and capabilities that are delivered. For example, the utility and interoperability of the Exchange Network depends on the use of compatible computer hardware/software and technical processes and on the use of agreed-upon data standards and XML schema.

The table below outlines some of the goals, tasks, outputs, outcomes, and relevant quality assurance guidance documents that may be useful to applicants when developing their proposed project work plans. *The goals and tasks included in this table are only examples of the types of activities applicants may wish to propose, and they are not intended to limit the types of projects or activities that applicants may propose.*

Applicants for the FY 2006 Exchange Network Grant Program are not required to submit a Quality Assurance Project Plan (QAPP) as part of the application package. Each applicant who receives an award will be required to submit a QAPP that is tailored to the activities in his/her particular proposal within a specified period of time after the award is issued, as a programmatic condition of the Assistance Agreement. See the attached table as a framework to ensure that all activities are covered.

FY 2006 ENVIRONMENTAL INFORMATION EXCHANGE NETWORK GRANT PROGRAM
QUALITY ASSURANCE GUIDELINES

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
Activity Group: Infrastructure Development				
Develop and implement an Exchange Network node	Review demonstrated node configurations	Appropriate node configuration identified	The state/territory/tribe understands the requirements for developing an Exchange Network node in the information technology environment of that state/territory/tribe	Refer to the "Node Developer Tool Box" at http://www.exchangenetwork.net/node/dev_toolbox/index.htm See the Demonstrated Node Configuration (DNC) documents available at http://www.exchangenetwork.net/node/dnc/index.htm
	Develop an Exchange Network node	Node developed, but not yet tested	The state/territory/tribe understands the Exchange Network node specifications and requirements that will enable automated data exchanges	See the "30 Minute Guide to Developing and Implementing an Exchange Network Node," at http://www.exchangenetwork.net/node/dev_toolbox/node_guide_v1.1.doc See the "Network Node Functional Specification, Version 1.1" at http://www.exchangenetwork.net/node/dev_toolbox/node_functional_spec_v1.1.pdf See the "Network Exchange Protocol, Version 1.1" at http://www.exchangenetwork.net/node/dev_toolbox/network_exchange_protocol_v1.1.pdf See the "Network Security Guidelines and Recommendations," at http://www.exchangenetwork.net/node/dev_toolbox/security_guidelines_041603.pdf

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
	Test the node to verify compliance with Exchange Network node functional specifications and address any shortcomings	Node tested and compliant with functional specification verified	Better understanding of how to meet the Network node specifications within a particular information technology environment	See the Node "Integration Test Tool" at https://test.epacdxnode.net/test/
	Implement an operational node	Operational status of node verified by EPA's Central Data Exchange or other means Demonstrated ability to exchange data automatically through the node with other Exchange Network partners	Increased speed and timeliness of data exchanges Increased efficiency of data exchanges by reducing administrative burdens and need for manual interventions Lower costs and expanded functionality of infrastructure due to the sharing of information technology components and tools among partners	See "Exchange Network Node Implementation Guide, Version 1.0" at http://www.exchangenetwork.net/node/dev_toolbox/implementation_guide_v1.0_032504.pdf

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
Enhance other infrastructure capabilities to improve Exchange Network capabilities	Assess current infrastructure capabilities: security controls, web procedures, and data management processes that would identify any areas where enhancements are needed	Assessment of security controls in comparison to recommended controls	Better understanding of security threats and vulnerabilities and the types of controls needed to minimize risks	See the "Network Security Guidelines and Recommendations," at http://www.exchangenetwork.net/node/dev_toolbox/security_guidelines_041603.pdf
	Implement the security controls, web procedures, and data management processes that are needed to participate in the Exchange Network	Security controls that comply with the Network security guidelines and recommendations	Implementation of the security controls needed to ensure that the availability, integrity, and if necessary, the confidentiality of the data will not be compromised	
Activity Group: Data Exchange, Analysis and Integration				
Develop and implement an Exchange Network data flow	Identify data flows that are of most interest to Exchange Network partners	Verification that the data flow is of interest to other Exchange Network partners	Clearer understanding of the data that are needed or of value to other states/territories/tribes and that could be exchanged using the Exchange Network	Refer to Appendix B of the FY 2006 solicitation notice for EPA Program Office suggestions See the "Core Reference Model," an inventory that organizes and identifies commonalities among current/potential state and EPA data exchanges, http://www.exchangenetwork.net/dev_schema/crm_v1_033103.pdf

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
	Work with other partners to specify the data flow requirements	Data flow requirements specified	Identification of the initial areas to be addressed by partners when developing Trading Partner Agreements	Refer to Appendix B of the FY2006 solicitation notice for EPA Program Office suggestions
	Determine whether approved data standards exist that may apply to the data flow	Relevant data standards identified	The use of data standards in data flows will facilitate the preparation of XML schema or the mapping of data to registered XML schema	See Environmental Data Standards Council (EDSC)-approved data standards, http://www.envdatastandards.net or http://oaspub.epa.gov/edr/epastd$.startup
	Incorporate approved data standards into the data that are collected, stored, and exchanged	Incorporation of approved data standards into Exchange Network data flows	Enhanced partner capabilities for analyzing, comparing, and integrating data due to the use of common data standards and formats	See Environmental Data Standards Council (EDSC)-approved data standards, http://www.envdatastandards.net or http://oaspub.epa.gov/edr/epastd$.startup
	Obtain approved XML schema, if available	XML schema obtained	Enhanced ability of a partner to participate in a particular Exchange Network data flow	See the Exchange Network XML Registry for a list of approved XML schema and schema components at http://oaspub.epa.gov/emg/xmlsearch$.startup See the "Shared Schema Components Usage Guide" at http://www.exchangenetwork.net/registry/SharedSchemaComponents-UsageGuide.pdf See the "Shared Schema Components Technical Reference" at

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
				http://www.exchangenetwork.net/registry/SchemaSchemaComponents-TechnicalReference.pdf 5
	If an XML schema for the data flow of interest is not available, establish or participate in a state/EPA Integrated Project Team (IPT) to develop a schema	Participation in an IPT	Enhanced collaboration among Exchange Network partners to implement data flows of interest	
	Develop an XML schema	New or revised XML schema developed, but not yet tested	Contribution to XML schema modules listed in the Exchange Network XML Registry and to the Core Reference Model	See the "Develop XML Schema" and the "XML Design Rules and Conventions" at http://www.exchangenetwork.net/dev_schema/index.htm
	Test the XML schema for compliance with the Exchange Network Design Rules and Conventions and justify, document, and address any deviations	Documentation of XML schema testing and follow-up schema revisions, if necessary	Contribution to the XML Registry and Core Reference Model for possible reuse by other partners	See the "XML Schema Review Process" at www.exchangenetwork.net/documents/SPRSC_final.doc See the Schema Design Tool for the Facility Registry System (FRS) at http://www.epa.gov/enviro/html/frs_demo/design_tool.html
	Post new or revised XML schemas on the Exchange	New or revised XML schema posted	Use of common XML schema allows multiple partners to share data	See the Exchange Network XML Registry for a list of approved XML schema and schema components at http://oaspub.epa.gov/emg/xmlsearch$.startup

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
	Network XML Registry		across the Exchange Network	
	Map data in partner databases to the approved XML schema	Data mapped to XML schema	Increased availability of data from a particular partner to other Exchange Network partners	
	Develop schema validation and data error-checking tools	Availability of schema validation and error-checking tools to improve the quality of data flowing over the Exchange Network	Availability of higher-quality data for decision-making and programmatic operations	
	Establish Trading Partner Agreements (TPAs) or similar agreements that describe the parameters for exchanging the data with other Exchange Network partners	TPAs established with other Exchange Network partners	Agreed-upon exchanges of data through the Exchange Network to address partners' business needs	"Trading Partner Agreements: Analysis and Best Practices" http://www.exchangenetwork.net/exchanges/TPA_Final_Report_Best_Practices.doc
	Implement an operational Exchange Network data flow	Exchange Network data flow becomes operational	Electronic availability of standardized, timely, high-quality data over the Exchange Network	

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
Analyze or integrate data that are shared through the Exchange Network to address an environmental or related issue	Identify data analysis needs	Description of data analysis needs	Better understanding of data analysis needs and capabilities	See 2003 Draft Report on the Environment," http://www.epa.gov/indicators/roe/html/roeTOC.htm
	Identify relevant data that are available through the Exchange Network	List of relevant data that are available from Exchange Network partners	Better understanding of how the Exchange Network can be used to address data and information needs	See State Information Technology Profiles available from the Environmental Council of the States (ECOS) at http://www.ecos.org/section/committees/information_management
	Establish Trading Partner Agreements (TPAs) or similar agreements with other Exchange Network partners to share relevant data	TPAs established with other Exchange Network partners	Agreed-upon exchanges of data using the Exchange Network to address partners' business needs	"Trading Partner Agreements: Analysis and Best Practices" http://www.exchangenetwork.net/exchanges/TPA_Final_Report_Best_Practices.doc
	Develop data analysis tools and protocols	Availability of data analysis tools and protocols to other Exchange Network partners	Greater capability to analyze data available through the Exchange Network	
	Develop or utilize Web services to address identified business needs	Increased availability and use of Web services available through the Exchange Network	Increased use, analysis, and integration of data across institutional boundaries	

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
	Conduct data analyses using data available through the Exchange Network	Data analysis results that can be shared with other Exchange Network partners	Enhanced understanding of an environmental or related issue	
Use the Exchange Network to exchange geospatial data to enhance environmental decision-making and programmatic operations. Such a project might require the development of the dataset before exchange.	Prepare standard geospatial metadata for geospatial datasets	Relevant geospatial metadata is developed and published	Preparation of standard metadata ensures geospatial data can be easily searched and discovered by Network partners	See Federal Geographic Data Commission website for federal geospatial data standards, http://www.fgdc.gov/metadata See Geospatial One Stop website for publishing geospatial datasets, http://www.geodata.gov/gos
	Determine if geospatial dataset already exists	Relevant geospatial datasets identified	The re-use of existing datasets prevents duplicative efforts, reduces costs and ensures consistency across network nodes	See Geospatial One Stop website for existing geospatial datasets, http://www.geodata.gov/gos

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
Activity Group: Planning, Mentoring, and Training				
Address key training and mentoring needs of Exchange Network partners	Identify the training and mentoring needs of current and potential Exchange Network partners and conduct pre-training and mentoring assessments	Identification of organizations that need training and mentoring and assessment of pre-training and mentoring levels of knowledge	Better understanding of Exchange Network partners training and mentoring needs	
	Develop training and mentoring materials and courses	Availability of training and mentoring materials and courses that can be used by other partners	Increase or enhance participation in the Exchange Network by states/territories/tribes	
	Distribute training and mentoring materials and conduct training and mentoring courses	Number of training and mentoring sessions conducted	Increased knowledge about the Exchange Network and how it can be used to enhance decision making and programmatic operations	

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
	Conduct post-training and mentoring assessments and address any shortcomings in the training and mentoring materials/courses	Assessment of post-training and mentoring level of knowledge and revised training and mentoring materials/ courses	Continuing improvements in the training and mentoring available to Exchange Network partners	
Engage in collaborative planning activities to address data and information needs using the Exchange Network	Identify data and information needs that could be addressed using the Exchange Network	Identify major data and information needs	Better understanding of shared data and information needs among Exchange Network partners	Refer to Appendix B of the FY 2006 solicitation notice for EPA Program Office descriptions of key data flows See the "Core Reference Model," an inventory that organizes and identifies commonalities among current/potential state and EPA data exchanges, http://www.exchangenetwork.net/dev_schema/crm_v1_033103.pdf See 2003 Draft Report on the Environment," http://www.epa.gov/indicators/roe/html/roeTOC.htm
	Outline the planning project activities and expected outputs/ outcomes	Written documentation of project goals, activities, and expected outputs/outcomes	Clearer understanding of the steps that need to be taken to address the identified data/information need	

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
	Identify and establish collaboration among relevant partners	Written documentation of partner roles, responsibilities, and expectations	Increase collaboration among partners to address major data and information needs	
	Describe what resources are needed to carry out the project and how they will be distributed among the project partners	Written documentation of how available funds will be distributed across the project among the partners	Increased knowledge about the needs, capabilities, and expertise of other Exchange Network partners	
	Implement the planning project, record the results, and outline the next steps	Description of the results of the planning process that can be used as a foundation for the development and implementation of new Exchange Network capabilities	Multi-partner foundation for collaboratively developing and implementing new or enhanced Exchange Network capabilities	

GOAL	TASK	OUTPUT	OUTCOME	QUALITY ASSURANCE GUIDANCE DOCUMENTS
Activity Group: Challenge				
Engage in multi-state collaboration to undertake the activities under the Data Exchange Analysis, and Integration and the Mentoring, Planning and Training Groups	Tasks may include any of those listed above.	See the outputs listed above.	See the outcomes listed above.	Refer to the guidance documents listed above. Also see Section III-1 for Eligibility criteria.

Appendix E

Detailed Application Instructions

Applicants for the FY 2006 Exchange Network Grant Program must submit a complete application package to EPA by November 21, 2005. Complete packages will be processed first. Applicants may submit their applications in hard copy through the U.S. Postal Service or an overnight mail or courier delivery service *or* electronically through the Grants.gov Web site (http://www.grants.gov). This Appendix provides detailed instructions on preparing the application package.

Overview of Application Package

The application package *must* include the following materials:

- Standard Form (SF) 424, Application for Federal Assistance
- SF-424A, Budget Information for Non-Construction Programs
- SF-424B, Assurances for Non-Construction Programs
- Certification Regarding Lobbying
- EPA Form 4700-4, Pre-Award Compliance Review Report
- EPA Form 5700-54, Key Contacts Form
- Work Plan (Work plans must address the Environmental Results information discussed in Section I-1 because applications will be reviewed for Section V Evaluation Criteria.)
- Detailed Itemized Budget
- SF-LLL, Disclosure of Lobbying Activities, if your organization is involved in lobbying
- Copy of Negotiated Indirect Cost Rate Agreement, if indirect costs are included in the budget
- Biographical Sketches for the Project Manager(s).

Submitting a Hard-Copy Application Package

If submitting a hard-copy application, please include: 1) the original application package, including all of the materials outlined above, plus two copies of the entire package; and 2) one self-addressed envelope, if you wish to be notified when EPA receives your application.

The forms above are available from EPA's Office of Grants and Debarment at http://www.epa.gov/ogd/AppKit/application.htm. If you have any difficulty downloading the forms from this site, you may contact Rebecca Moser at (202) 566-1679 to request copies of the forms by fax.

For instructions on developing the work plan or completing specific forms, please see the electronic application instructions below. Hard-copy applications must be postmarked or

delivered to an overnight mail or courier service by November 21, 2005. *EPA recommends the use of overnight delivery or courier services to avoid any unnecessary delays.*

Applicants should send their hard-copy applications to one of the following addresses:

U.S. Postal Service Deliveries:
Rebecca Moser
U.S. Environmental Protection Agency
Office of Environmental Information
Office of Information Collection
1200 Pennsylvania Ave., NW, Mail Code 2823-T
Washington, DC 20460

Overnight Delivery or Courier Services
Rebecca Moser
U.S. Environmental Protection Agency
Office of Environmental Information
Office of Information Collection
1301 Constitution Avenue, NW, 6th Floor, #6143-K
Washington, DC 20460
Phone: (202) 566-1679

If submitting a hard-copy application, you are also encouraged, but not required, to submit an electronic copy of the project work plan to Rebecca Moser via email at moser.rebecca@epa.gov.

Submitting an Electronic Application Package

If submitting an application electronically, rather than in hard copy, please submit the application through the Grants.gov Web site, http://www.grants.gov. The Funding Opportunity Number for this announcement is **EPA-OEI-06-01**. Electronic applications must be submitted to this Web site no later than **midnight, Eastern Time on November 21, 2005**. EPA advises applicants to submit their electronic applications early, so that if any technical difficulties arise, there will still be time to address them before the application deadline.

The electronic submission of your application must be made by an official representative of your institution who is registered with Grants.gov. For more information, go to http://www.grants.gov and click on "Get Started," and then "Authorized Organization Representative (AOR)." *Please note that the registration process may take a week or longer*. If your organization is not currently registered with Grants.gov, encourage your office to designate an AOR and ask that individual to begin the registration process as soon as possible.

To begin the application process for this grant program, go to http://www.grants.gov and click on "Apply for Grants." Then click on "Apply Step 1: Download a Grant

Application Package and Application Instructions" to download the PureEdge viewer and obtain the application package (https://apply.grants.gov/forms_apps_idx.html). *Please note that in order to view and complete the application materials, you must first download the PureEdge viewer.* You may obtain the application package by entering the Funding Opportunity Number, EPA-OEI-06-01, in the space provided.

Description of Application Materials

The application package *must* include all of the following materials:

1. **Standard Form (SF) 424, Application for Federal Assistance**
   Complete the form. There are no attachments.
   Please note that the applicant's Dun and Bradstreet (D&B) Data Universal Number System (DUNS) number must be included on the SF-424. Organizations may obtain a DUNS number at no cost by calling the toll-free DUNS number request line at 1-866-705-5711.

2. **SF-424A, Budget Information for Non-Construction Programs**
   Complete the form. There are no attachments.
   The total amount of federal funding requested for the two-year project period should be shown on line 5(e) and on line 6(k) of SF-424A. If indirect costs are included, the amount of indirect costs should be entered on line 6(j). The indirect cost rate (i.e., a percentage), the base used to calculate indirect costs (e.g., personnel costs and fringe benefits and dollar amount), and the amount of indirect costs requested (product of the indirect cost rate times the base) should be indicated on line 22. If indirect costs are requested, a copy of the Negotiated Indirect Cost Rate Agreement must be submitted as part of the application package, and the indirect costs requested on the SF-424A must reflect the rate in the Indirect Cost Rate Agreement. (See instructions for document 10 below.)

3. **SF-424B, Assurances for Non-Construction Programs**
   Complete the form. There are no attachments.

4. **Lobbying Form – Certification Regarding Lobbying**
   Complete the form. There are no attachments.

5. **EPA Form 4700-4, Pre-Award Compliance Review Report**
   Complete the form. There are no attachments.

6. **EPA Form 5700-54, Key Contacts Form**
   Complete the form. There are no attachments.
   If additional pages are needed, attach these additional pages to the electronic application package by using the "Other Attachments Form" in the "Optional Documents" box. (See Application Preparation and Submission Instructions below for more details.)

7. Project Narrative Attachment Form – Work Plan, Including a Quality Assurance Narrative Statement

Prepare the Work Plan and attach it by clicking on "Project Narrative Attachment Form" and then "Add Mandatory Project Narrative File." (See Application Preparation and Submission Instructions below for more details.)

The Work Plan should be *no more than ten single-spaced pages* and should include the information outlined below:

A. General Project Information

1. Fiscal funding year and name of grant program (i.e., FY 2006 Exchange Network Grant Program)
2. Name of the applicant organization (i.e., state/territory/tribe and agency or department)
3. DUNS number
4. Title of Project – a short descriptive title (i.e., no more than 70 characters)
5. Project Description – a 3-5 sentence project description that highlights the major activities that are being proposed (i.e., infrastructure, data exchange/analysis/ integration, and/or planning/mentoring/training activities)
6. Project Manager – name and contact information (i.e., mailing address, phone number, fax number, and email address)
7. Head of Agency/Department – name, title, and contact information (i.e., for EPA's use in sending a notification letter, if the application is selected for funding)
8. Requested funding
   - total amount
   - portion of total requested as direct funding
   - portion of total requested as EPA-provided in-kind services, if any
9. Preferred assistance vehicle
   - grant or cooperative agreement (A cooperative agreement should be requested for projects that require substantial EPA involvement and the applicant is requesting EPA-provided in-kind services.)
   - amendment to an existing Performance Partnership Grant (PPG) or Consolidated Grant.

B. Project Goals, Tasks, Target Dates, and Outputs/Outcomes

Describe the major goals of the project covering *the two-year project period*. For each goal, outline the tasks that will be accomplished, along with the expected outputs and outcomes for each task. See Appendix D for some examples of possible project goals, tasks, target completion dates, and expected outputs/outcomes. Please note that the examples in Appendix D are not intended to limit the scope or types of projects that applicants could propose.

C. Total Project Budget and Goal-Specific Costs

List the *total project budget* and the *total costs associated with each goal*. Clearly indicate whether particular project goals must be completed before other goals can be pursued (e.g., a goal to implement an operational Exchange Network node would need to be achieved before implementing node-to-node data Exchanges). This goal-specific budget information is important, since EPA may wish to consider partially funding some projects. More detailed budget information must be included in the Detailed Itemized Budget. (See document 8 below.)

D. Formal Project Partners – Roles/Responsibilities and Distribution of Funds

If the proposed project involves formal project partners – partners who will actively participate in implementing the project – please outline the following:

- the roles and responsibilities of each partner in carrying out each of the project goals (i.e., as outlined in section B of the work plan);
- how the funding, if awarded, would be distributed by the recipient among other project partners, if at all; and
- how the applicant would ensure ongoing coordination and collaboration among the partners during the two-year project period (e.g., regular teleconferences, meetings, and/or written status reports).

F. Programmatic Resources and Key Personnel

Briefly describe the programmatic resources and key personnel that will be involved in the project. Highlight any expertise or past experiences that may be particularly helpful in carrying out the project. (Biographical sketches of the Project Manager(s) should be included in the application package, as described under section 11 below.)

G. Relevance to the Exchange Network

Describe how the project is relevant to the Exchange Network. This could include a description of how the project addresses one or more data flow areas described in Appendix B of this document or the planning, mentoring, and/or training activities described in Appendix C. This section could also be used to describe how the project would involve using the Exchange Network in innovative ways to help address an environmental issue. This section could also be used to discuss how the project will build on the previous work of other Exchange Network partners.

H. Past Performance

Describe the past performance of the applicant's organization in carrying out previously funded Exchange Network projects, if any, or other projects that were similar in size and scope to the project that is being proposed. For any other project that is mentioned, include a brief description of the project, the year the award was issued and by whom, the name of the awarding agency's project officer and hs/her contact information and the results that were achieved.

8. Budget Narrative Attachment Form – Detailed Itemized Budget

Prepare the Detailed Itemized Budget and attach it by clicking on "Budget Narrative Attachment Form" and then "Add Mandatory Budget Narrative." (See Application Preparation and Submission Instructions below for more details.)

The *total project budget and the costs associated with each major goal* should be described in a detailed itemized budget. The budget must include the level of detail outlined below. Please note that if the following budgetary information is not included, it will delay the review of your application.

A. Personnel – List all staff positions by title. Give the annual salary of each individual, the percentage of the individual's time that would be assigned to the project, and total personnel cost for the budget period.
B. Fringe Benefits – Identify the fringe benefit rate (i.e., percentage), the basis for its computation, and the types of benefits included.
C. Travel – Specify the mileage, per diem, and estimated number of trips (i.e., specifying in-state and out-of-state trips) and other costs for each type of travel.
D. Equipment – Identify each item of equipment to be purchased which has an estimated acquisition cost of $5,000 or more per unit and a useful lifetime of more than one year. Items with a unit cost of less than $5,000 are deemed to be supplies, pursuant to 40 CFR 31.3 and 30.2.
E. Supplies – Supplies include all tangible personal property other than "equipment." The detailed budget should identify categories of supplies to be procured (e.g., laboratory supplies or office supplies).
F. Contractual – Identify each proposed contract vehicle and specify its purpose and estimated cost.
G. Other – List each item in sufficient detail for U.S. EPA to determine whether the costs are reasonable or allowable.
H. Indirect Charges – If indirect charges are included in the budget, outline the approved indirect cost rate (i.e., must be verified based on the Indirect Cost Rate Agreement), a description of the base used to calculate indirect costs and total cost of the base, and the total indirect charges requested (i.e., product of rate times the base).

9. SF-LLL, Disclosure of Lobbying Activities (i.e., required if your organization is involved in lobbying)

Complete the form if your organization is involved in lobbying activities.

10. Other Attachments Form – Negotiated Indirect Cost Rate Agreement (if indirect costs are included in the project budget)

Use the "Other Attachments Form" in the "Optional Documents" box to attach a copy of your organization's Indirect Cost Rate Agreement, if applicable. (See Application Preparation and Submission Instructions below for more details.)

You must submit a copy of your organization's Indirect Cost Rate Agreement as part of the application package if your proposed budget includes indirect costs.

11. Other Attachments Form – Biographical Sketches for the Project Manager(s)

Use the "Other Attachments Form" in the "Optional Documents" box to attach a copy of the biographical sketch of each project manager for the proposed project. Each biographical sketch should outline the education, work history, and knowledge/expertise of the individual that relate to managing the proposed project.

Application Preparation and Submission Instructions

Documents 1 through 8 listed under Application Materials above should appear in the "Mandatory Documents" box on the Grants.gov Grant Application Package page.

For documents 1 through 6, click on the appropriate form and then click "Open Form" below the box. The fields that must be completed will be highlighted in yellow. Optional fields and completed fields will be displayed in white. If you enter an invalid response or incomplete information in a field, you will receive an error message. When you have finished filling out each form, click "Save." When you return to the electronic Grant Application Package page, click on the form you just completed, and then click on the box that says, "Move Form to Submission List." This action will move the document over to the box that says, "Mandatory Completed Documents for Submission."

For documents 7 and 8, you will need to attach electronic files. Prepare your project Work Plan as outlined above (see document 7 under Application Materials) and save the document to your computer as an MS Word or WordPerfect file. (U.S. EPA prefers to receive documents in MS Word, but documents prepared in WordPerfect will also be accepted.) When you are ready to attach your Work Plan to the application package, click on "Project Narrative Attachment Form," and open the form. Click "Add Mandatory Project Narrative File," and then attach your Work Plan (previously saved to your computer) using the browse window that appears. You may then click "View Mandatory Project Narrative File" to view it. Enter a brief descriptive title of your project in the space beside "Mandatory Project Narrative File Filename;" the filename should be no more than 40 characters long. If there other attachments that you would like to submit to accompany your Work Plan, you may click "Add Optional Project Narrative File" and proceed as before. When you have finished attaching the necessary documents, click "Close Form." When you return to the "Grant Application Package" page, select the "Project Narrative Attachment Form" and click "Move Form to Submission List." The form should now appear in the box that says, "Mandatory Completed Documents for Submission." Follow the same general procedures for attaching document 8 – the Detailed Itemized Budget – using the "Budget Narrative Attachment Form."

Documents 9 through 11 are listed in the "Optional Documents" box, but *please note that these so-called "optional" documents must also be submitted as part of the application package, if applicable to your organization.* You are only required to submit document 9 – SF-LLL, Disclosure of Lobbying Activities – if your organization is involved in lobbying activities. You are required to submit document 10 – Negotiated Indirect Cost Rate Agreement – if you have included any indirect costs in your proposed budget. You must submit document 11 – Biographical Sketches for Project Manager(s).

To attach document 10 and document 11, use the "Other Attachments Form" in the "Optional Documents" box. After attaching the documents, please remember to highlight the "Other Attachments Form" and click "Move Form to Submission List" in order to move the documents to the box that says, "Optional Completed Documents for Submission."

Once you have finished filling out all of the forms/attachments and they appear in one of the "Completed Documents for Submission" boxes, click the "Save" button that appears at the top of the Web page. *It is suggested that you save the document a second time, using a different name, since this will make it easier to submit an amended package later, if necessary.* Please use the following format when saving your file: "Applicant Name – FY 2006 Exchange Network – 1st Submission" or "Applicant Name – FY 2006 Exchange Network – Back-up Submission." If it becomes necessary to submit an amended package at a later date, then the name of the 2nd submission should be changed to "Applicant Name – FY 2006 Exchange Network – 2nd Submission."

Once your application package has been completed and saved, send it to your AOR for submission to U.S. EPA through Grants.gov. Please advise your AOR to close all other software programs before attempting to submit the application package through Grants.gov.

In the "Application Filing Name" box, your AOR should enter your organization's name (i.e., abbreviate where possible) and the words, "FY 2006 Exchange Network." The filing name should not exceed 40 characters. From the "Grant Application Package" page, your AOR may submit the application package by clicking the "Submit" button that appears at the top of the page. The AOR will then be asked to verify the agency and funding opportunity number for which the application package is being submitted. If problems are encountered during the submission process, the AOR should reboot his/her computer before trying to submit the application package again. [It may be necessary to turn off the computer (not just restart it) before attempting to submit the package again.] If the AOR continues to experience submission problems, he/she may contact Grants.gov for assistance by phone at 1-800-518-4726 or email at support@grants.gov. You are encouraged to submit your application early, in case problems are encountered that result in delays.

Applicants will receive two email confirmations from support@grants.gov. The first email will be a message stating the application has been received by Grants.gov. Once the application has been received by U.S. EPA, your AOR will receive a second email confirmation from support@grants.gov. (Please note that emails sent directly to this address will not be accepted.) If you have not received the second confirmation of receipt from Grants.gov within 14 days of the application deadline, please contact Rebecca Moser, Exchange Network Grant Program Manager, at (202) 566-1679. Failure to do so may result in your application not being reviewed.